

Fig.1

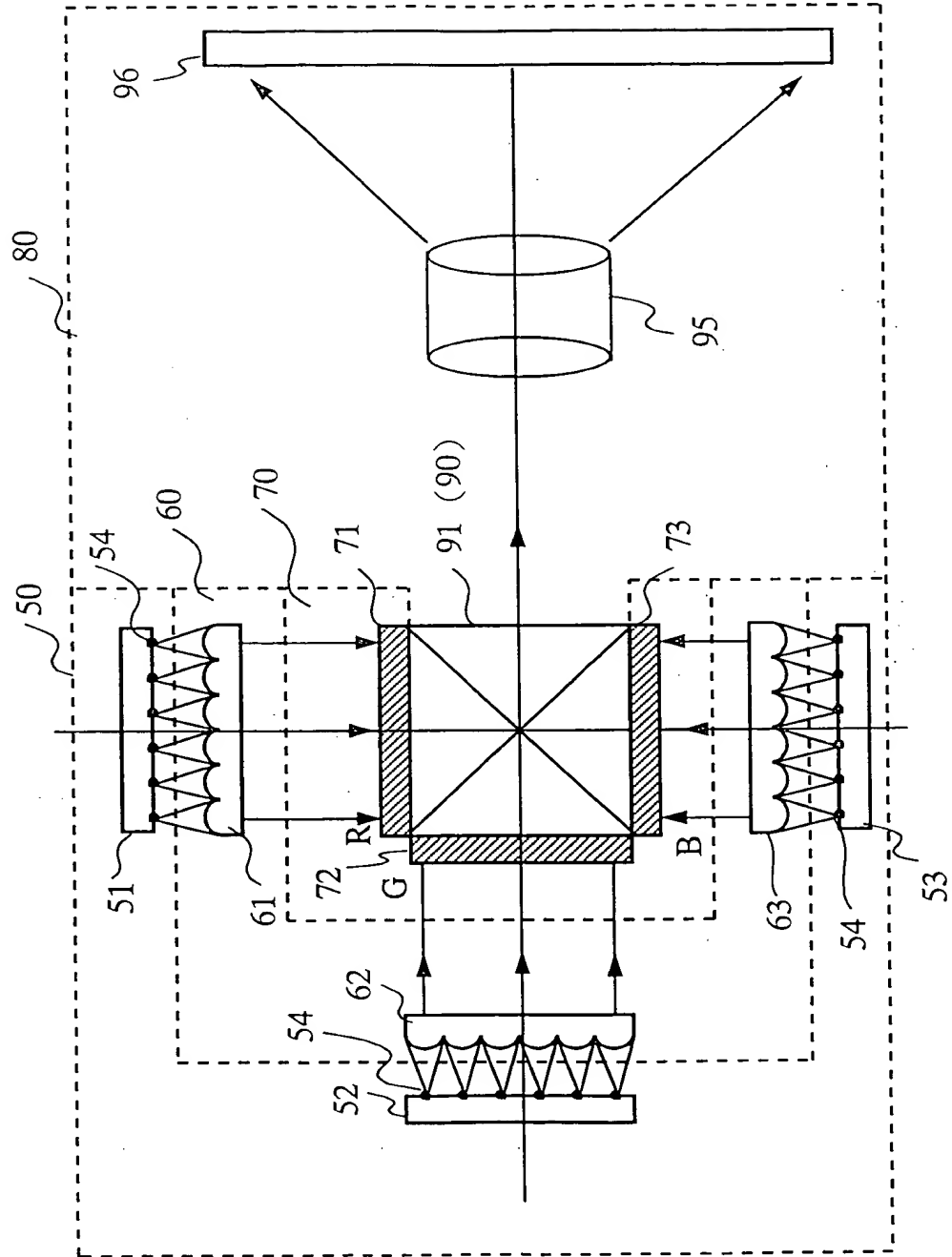


Fig.2

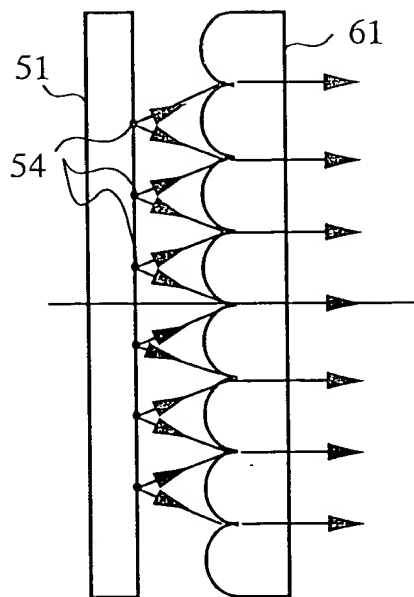


Fig.3

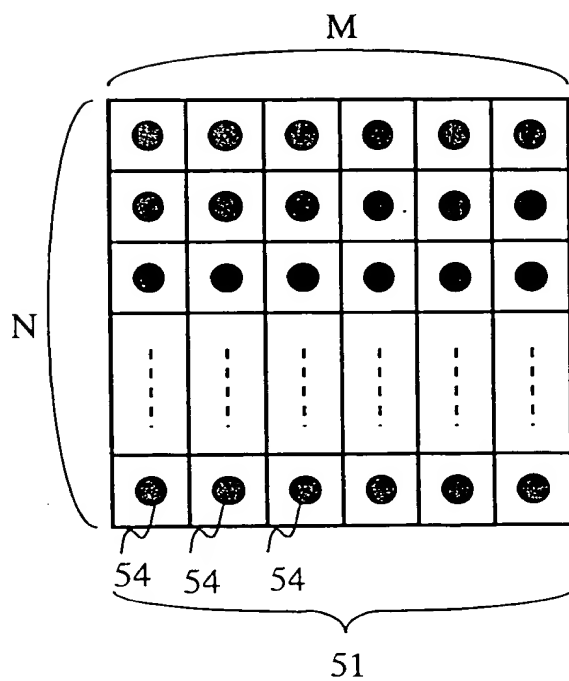


Fig.4

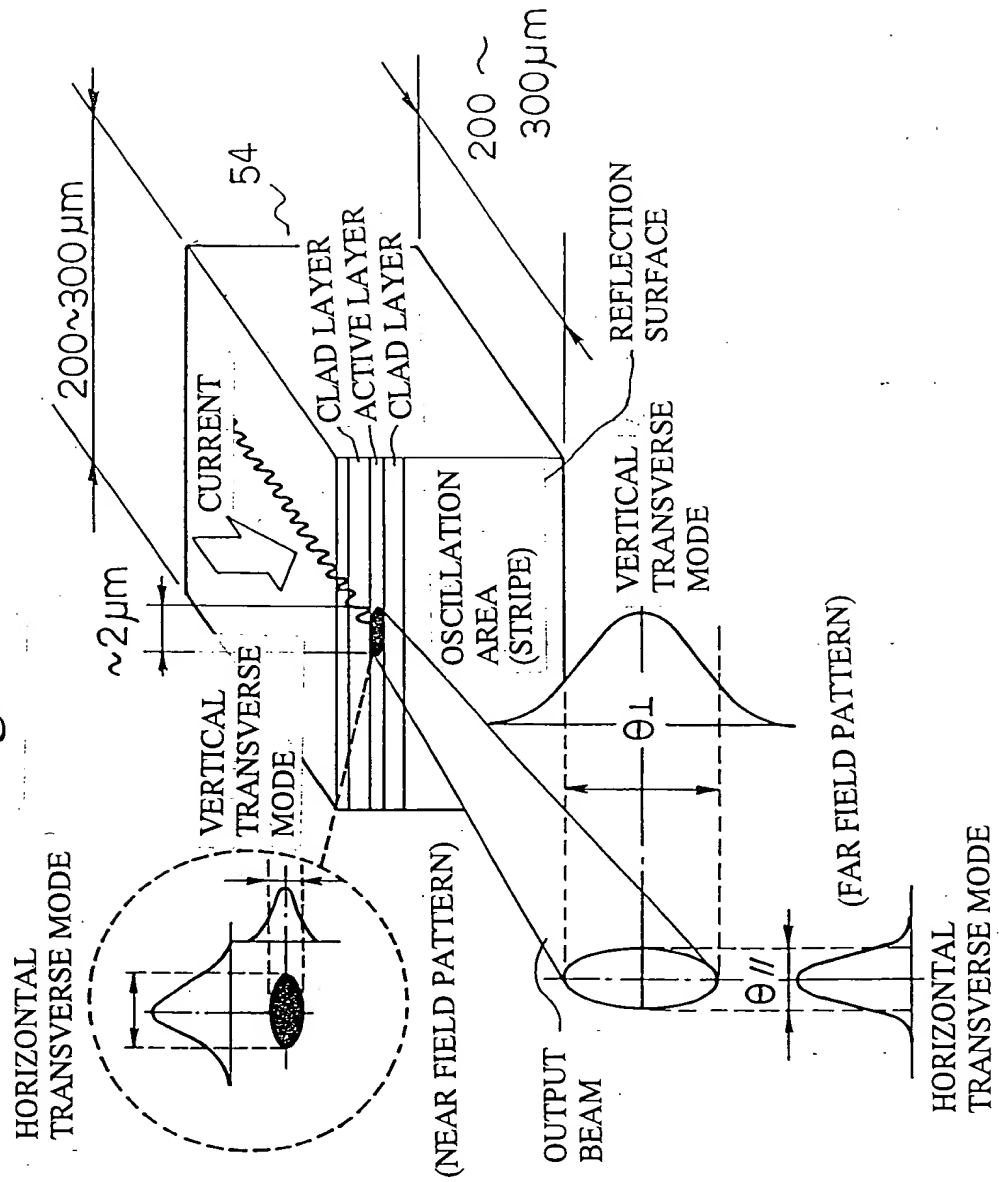


Fig.5

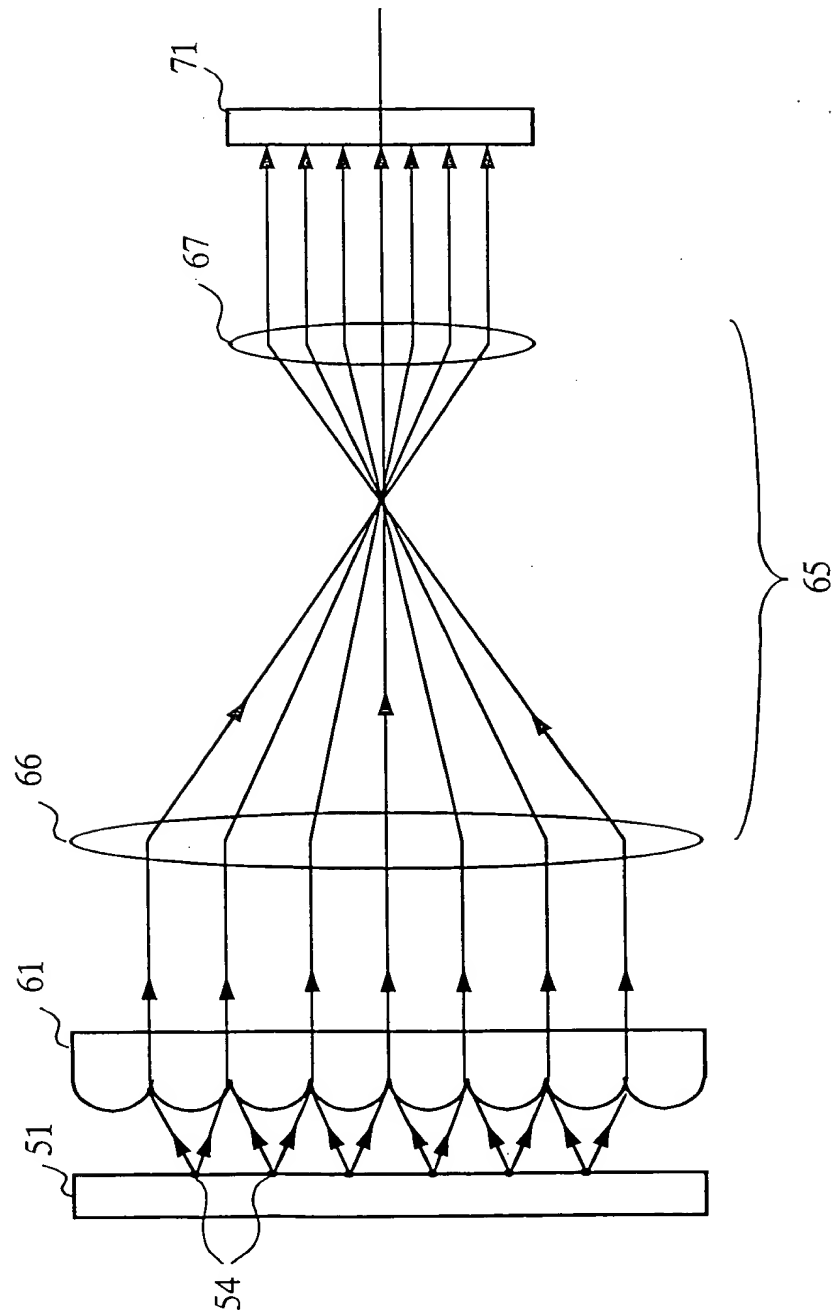


Fig.6

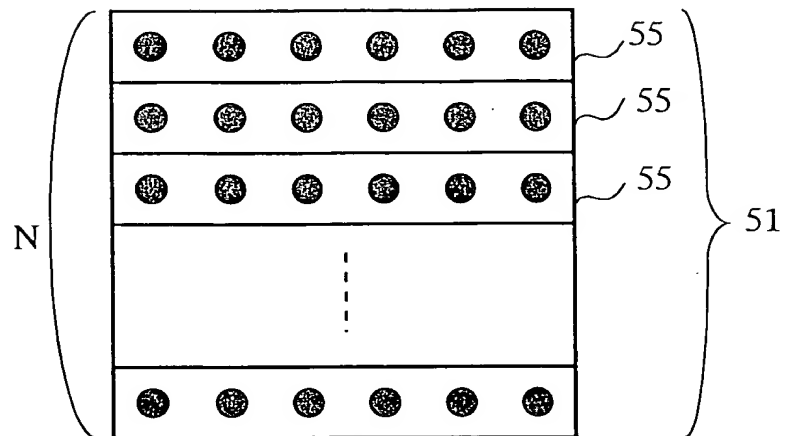
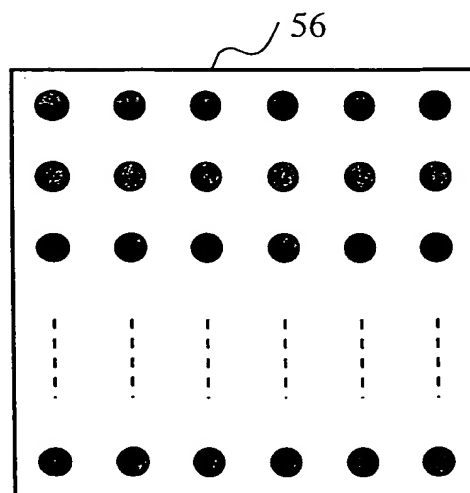


Fig.7



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Fig.8

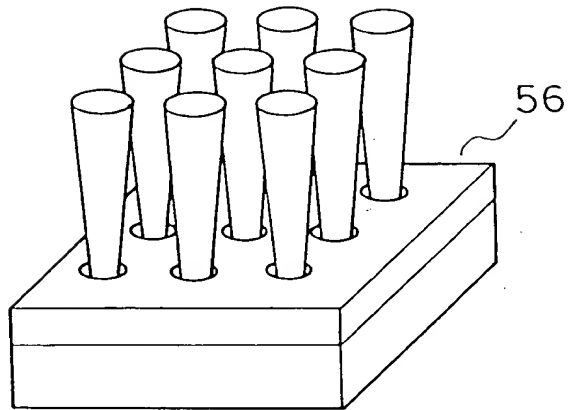


Fig.9

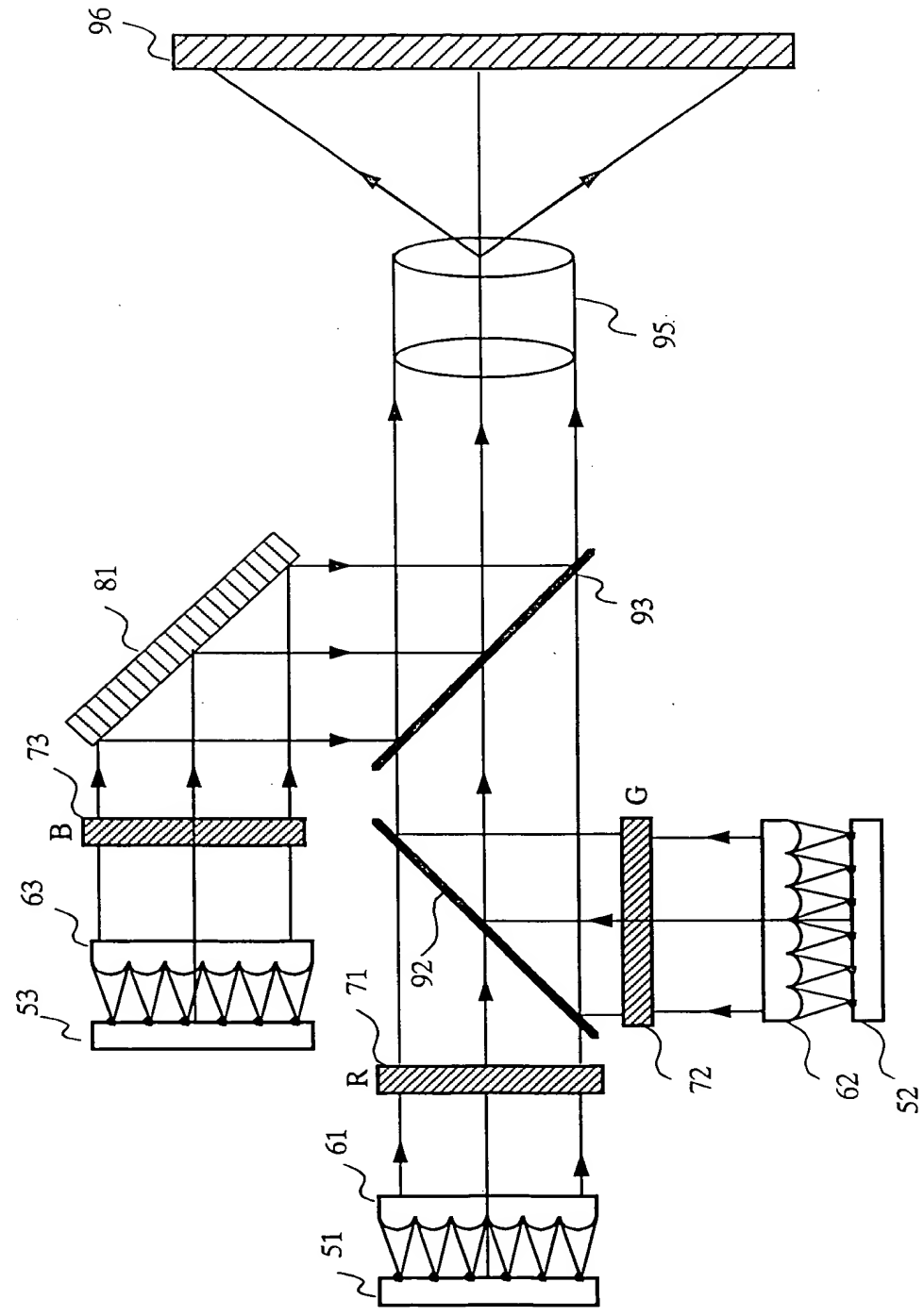
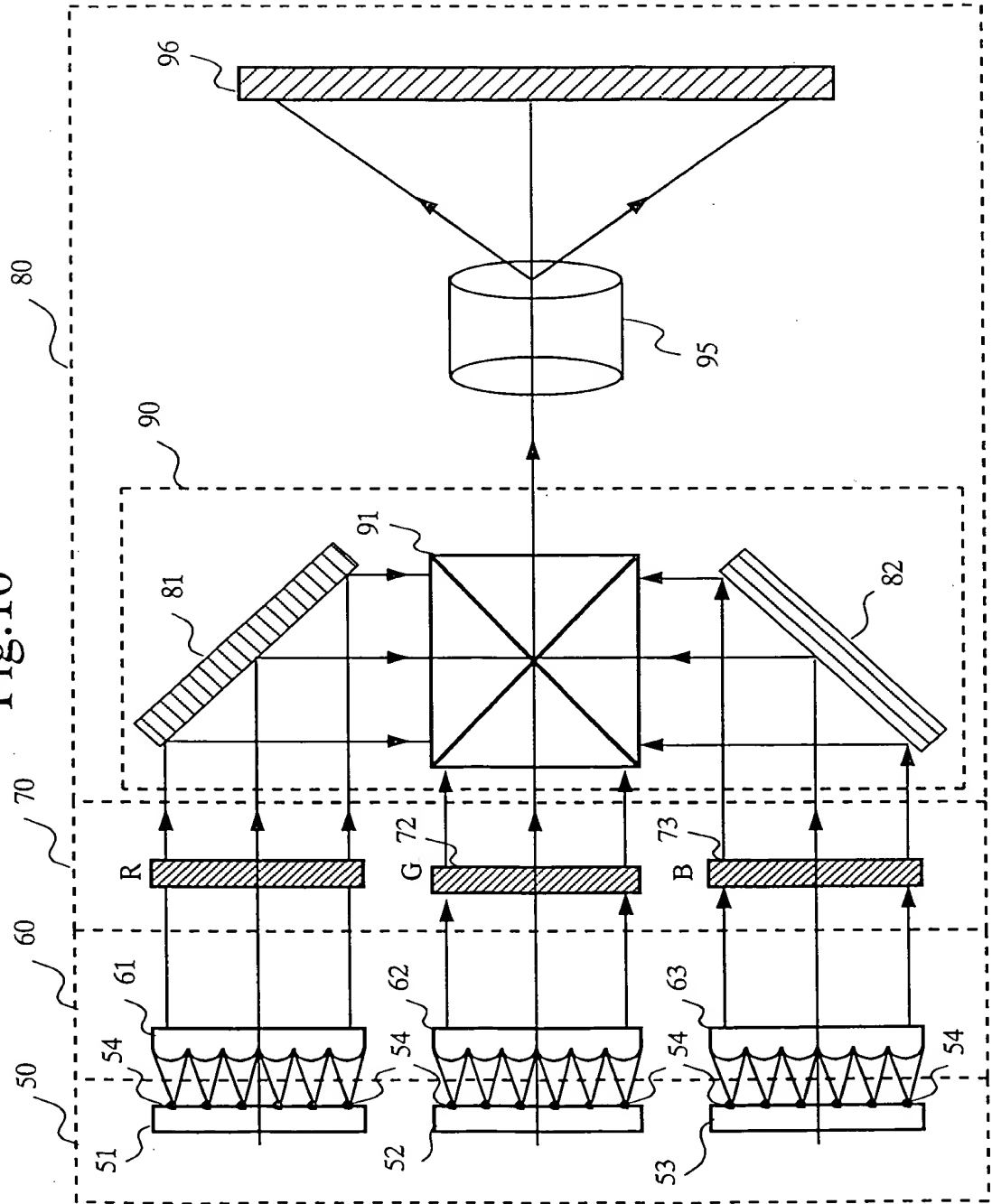
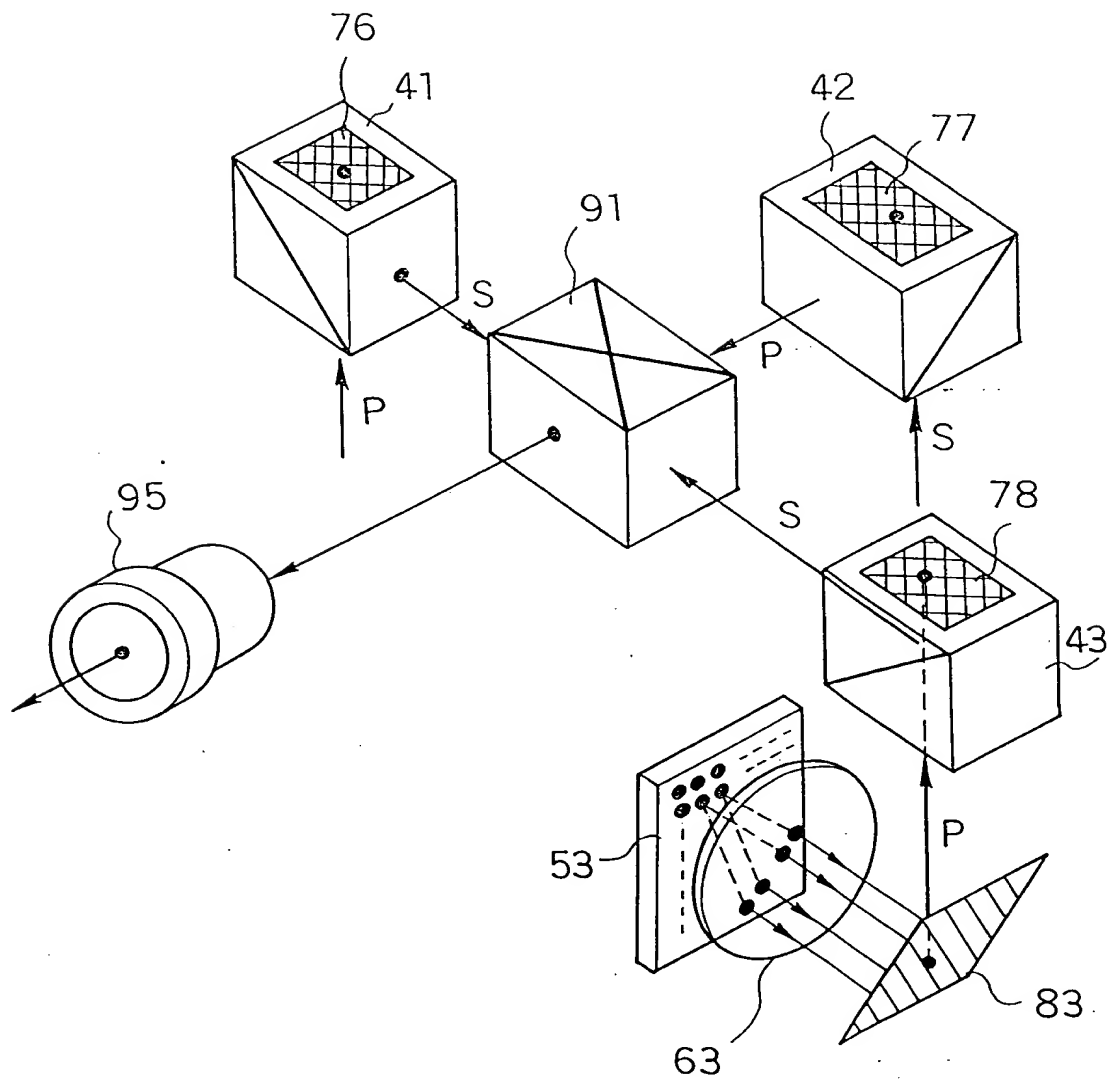


Fig.10



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Fig.11



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Fig.12

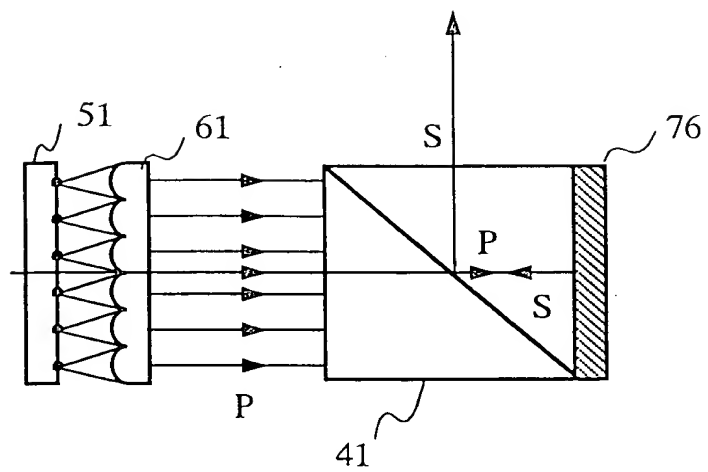
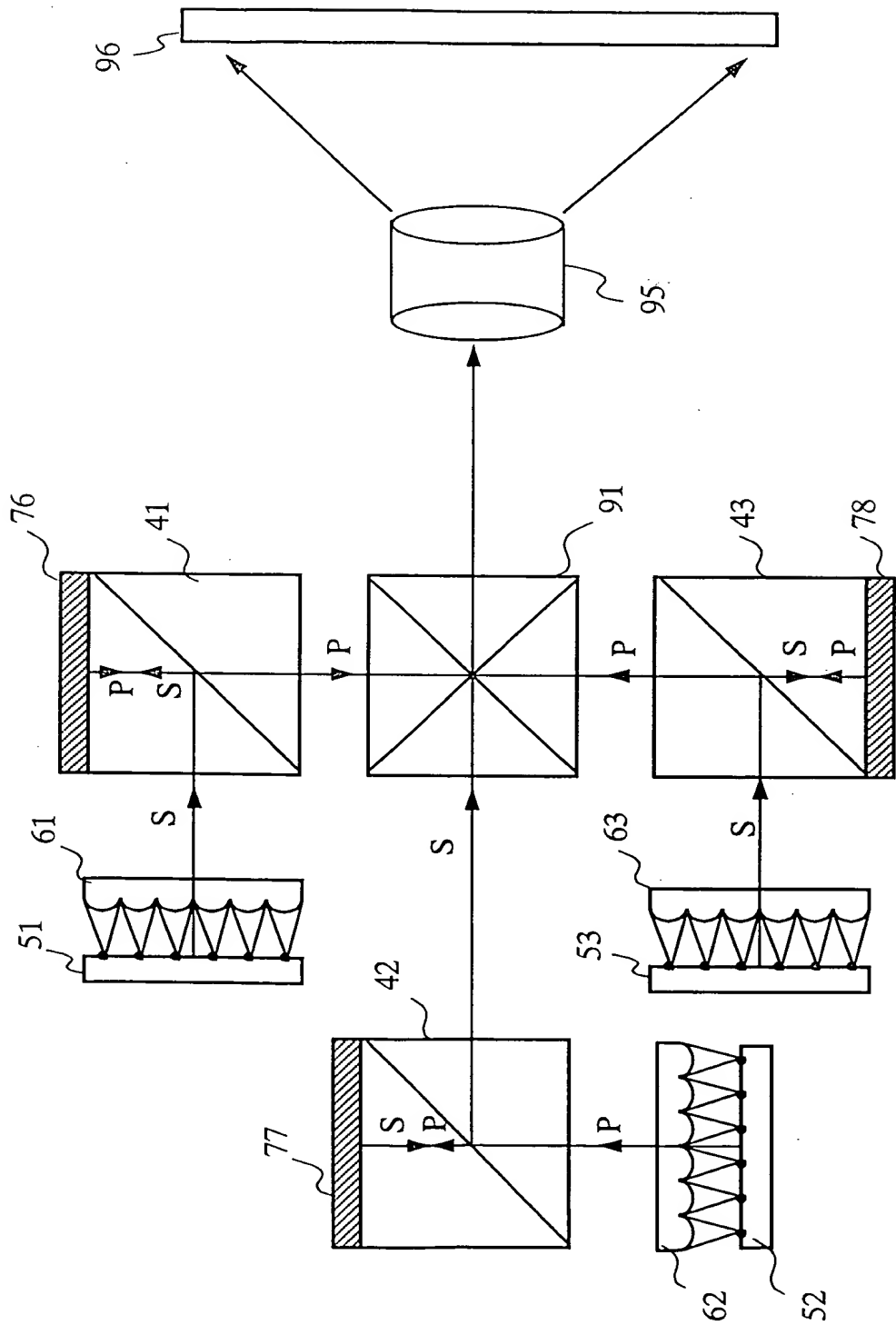
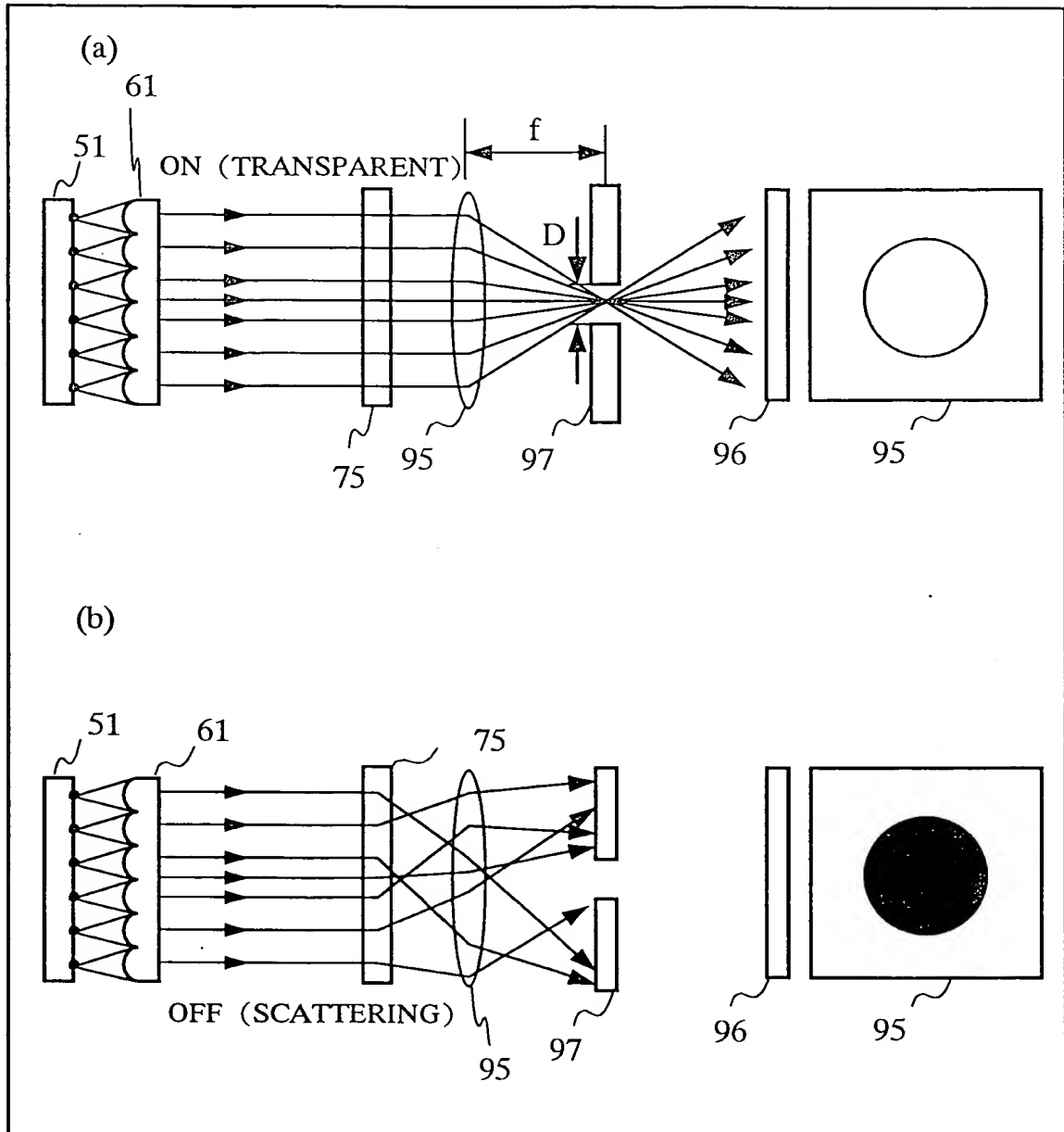


Fig.13



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Fig.14



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Fig.16

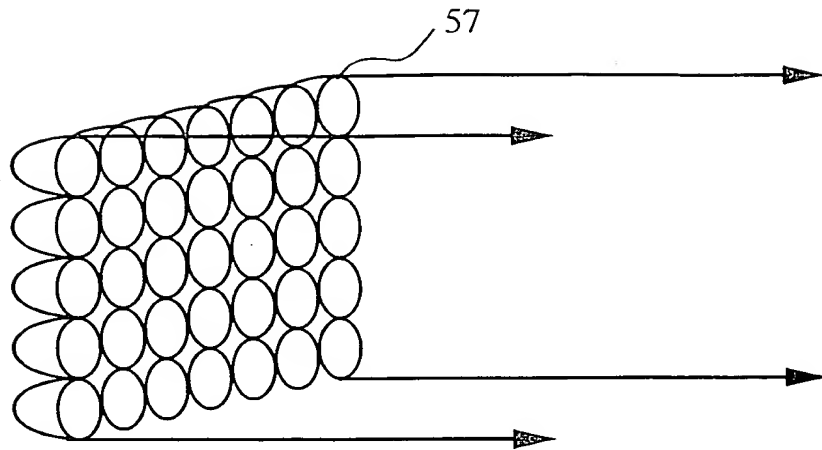
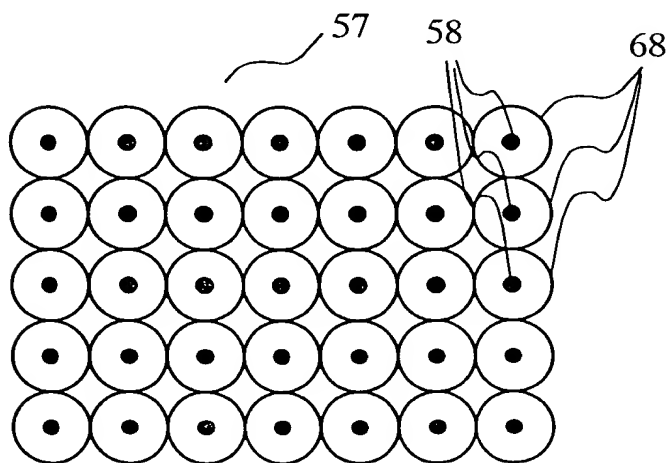
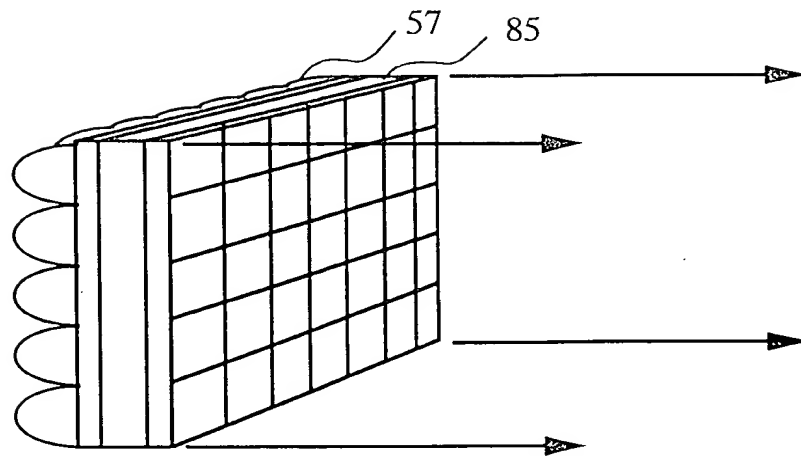


Fig.17



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Fig.18



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Fig.19

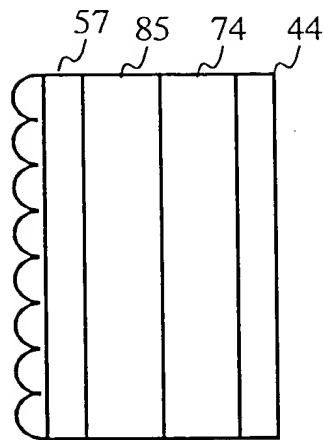
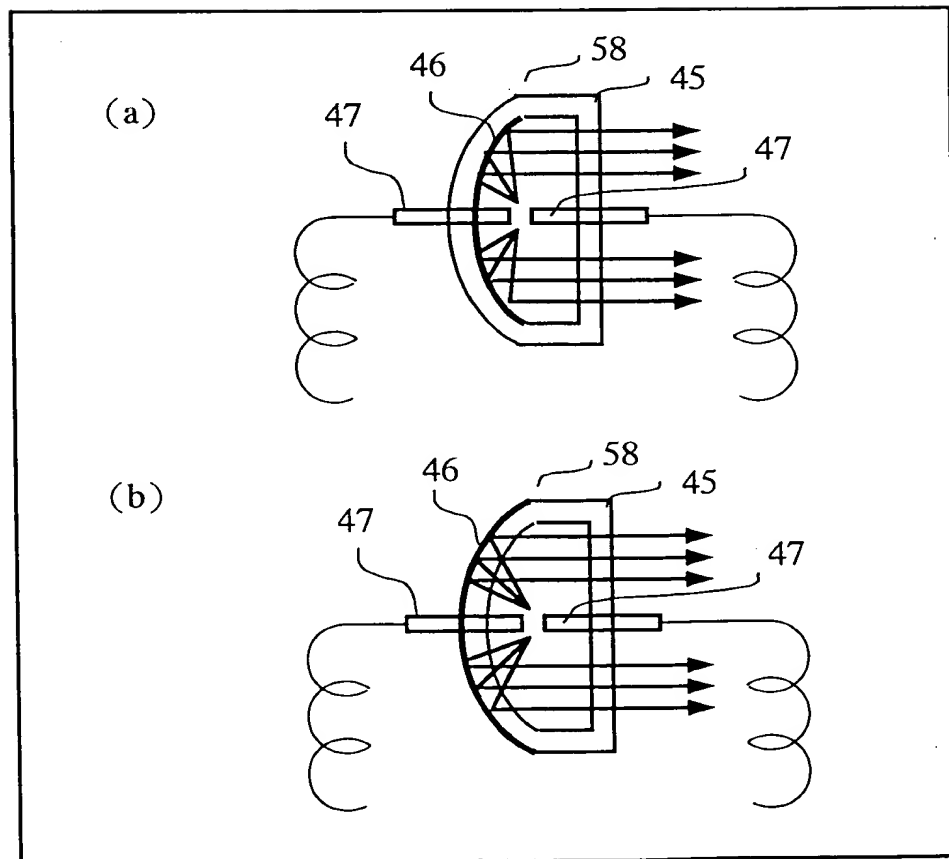


Fig.20



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Fig.21

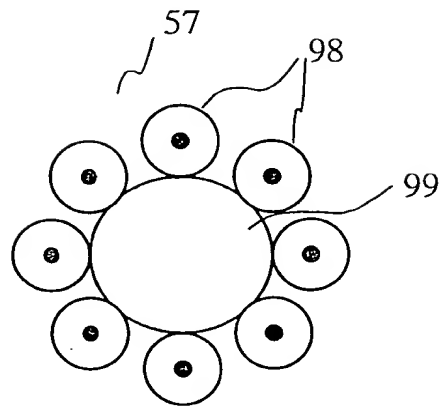
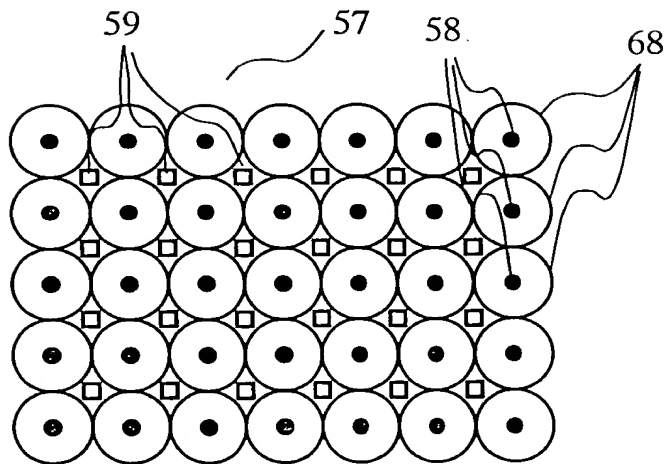


Fig.22



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Fig.24

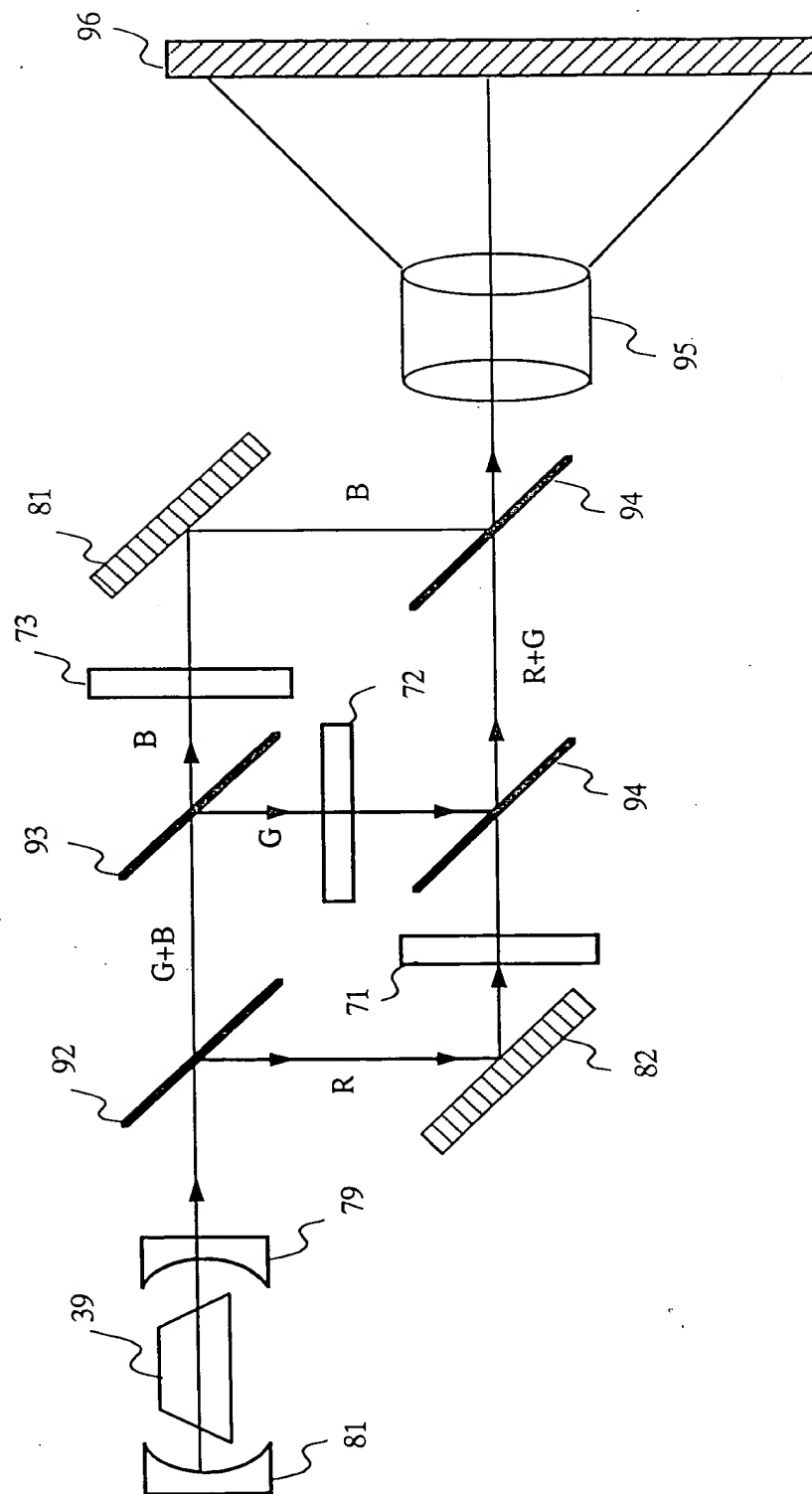


Fig. 25

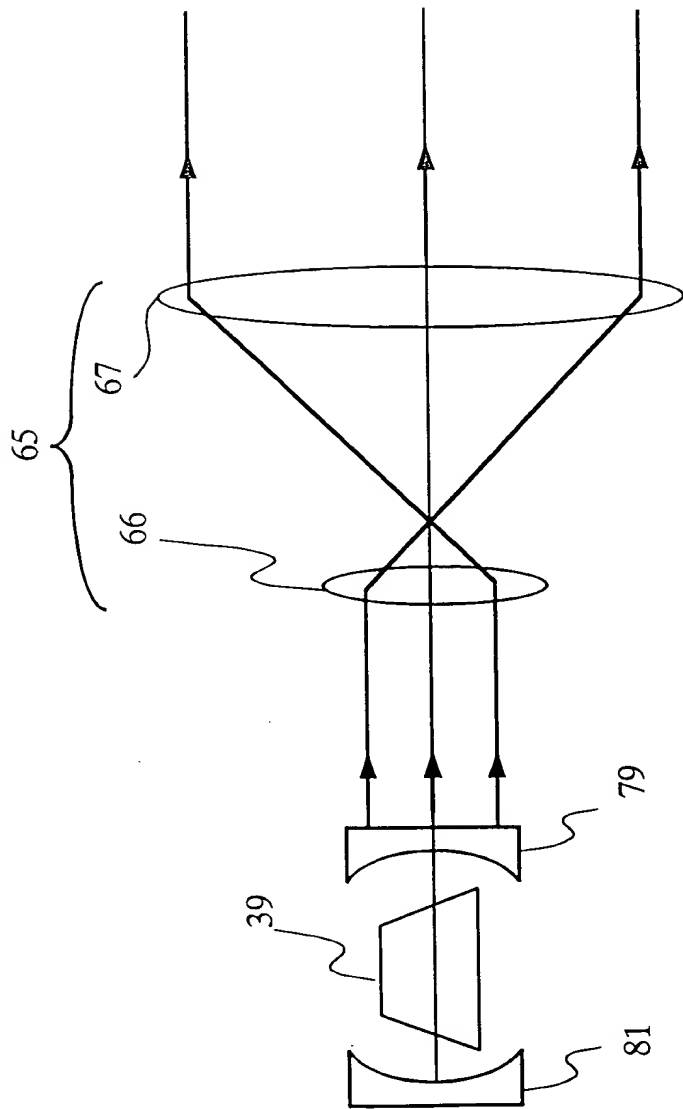


Fig.26

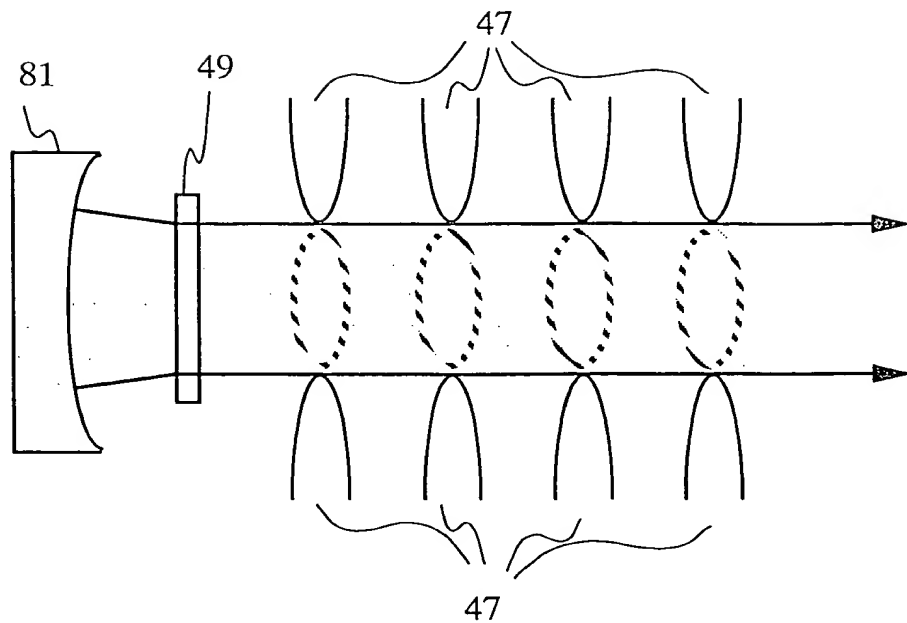


Fig.27

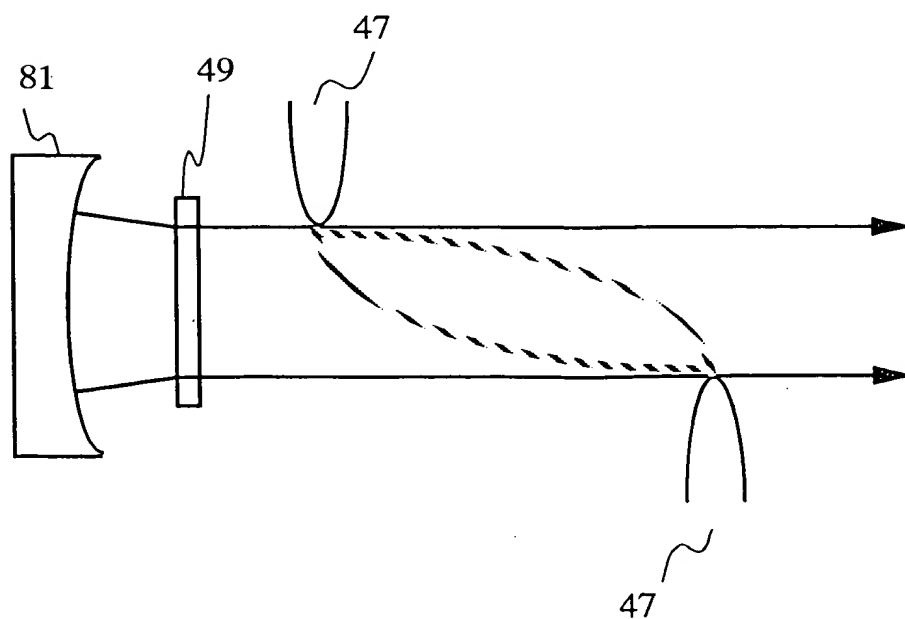


Fig.28

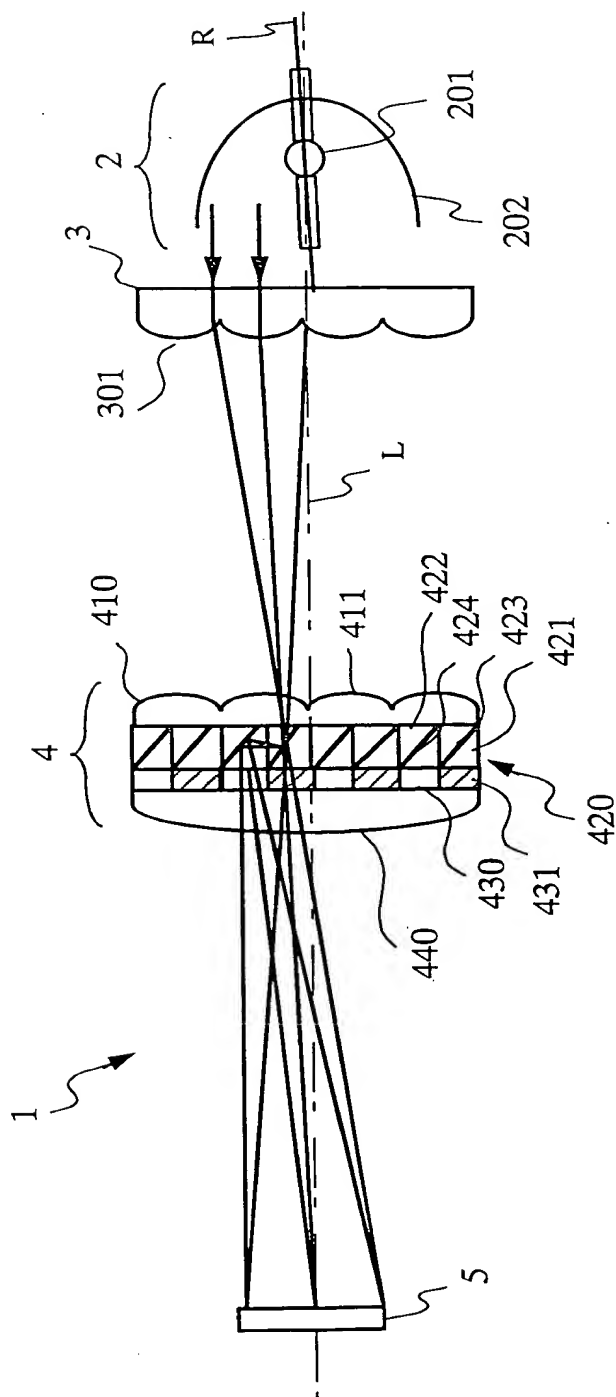


Fig.29

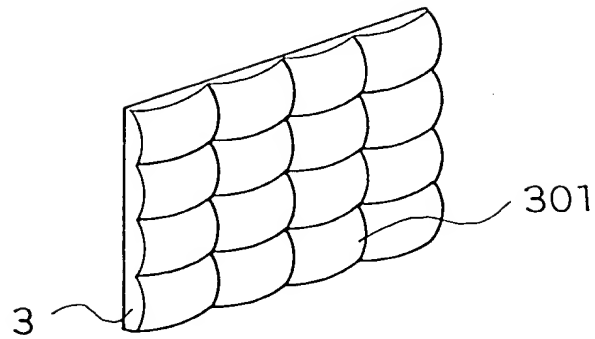


Fig.30

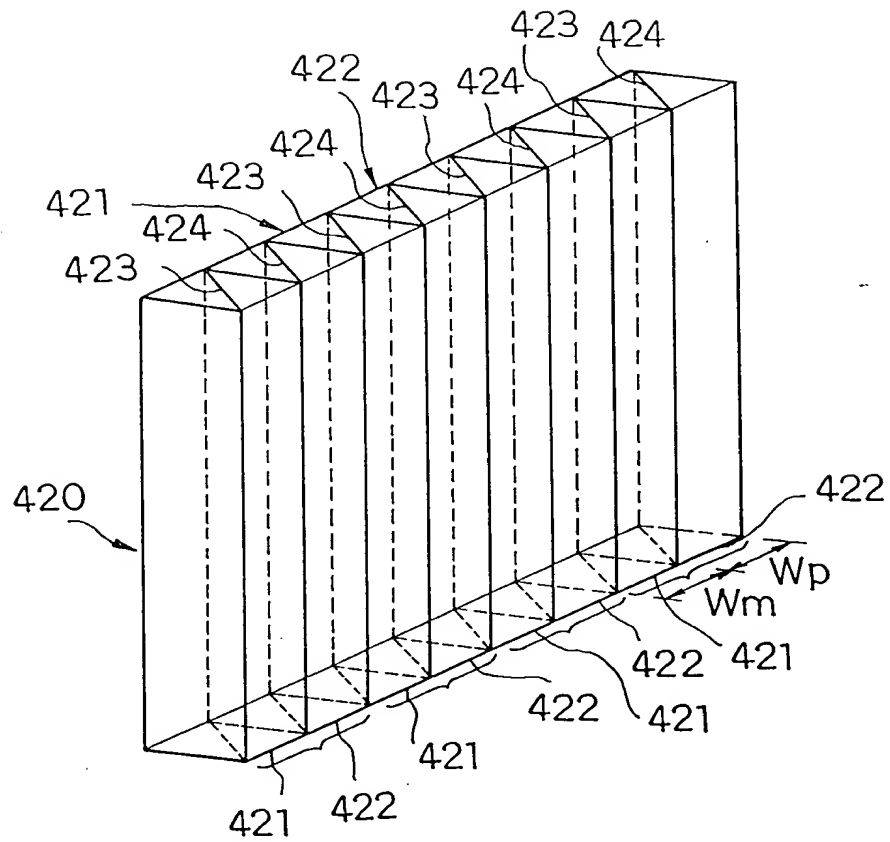
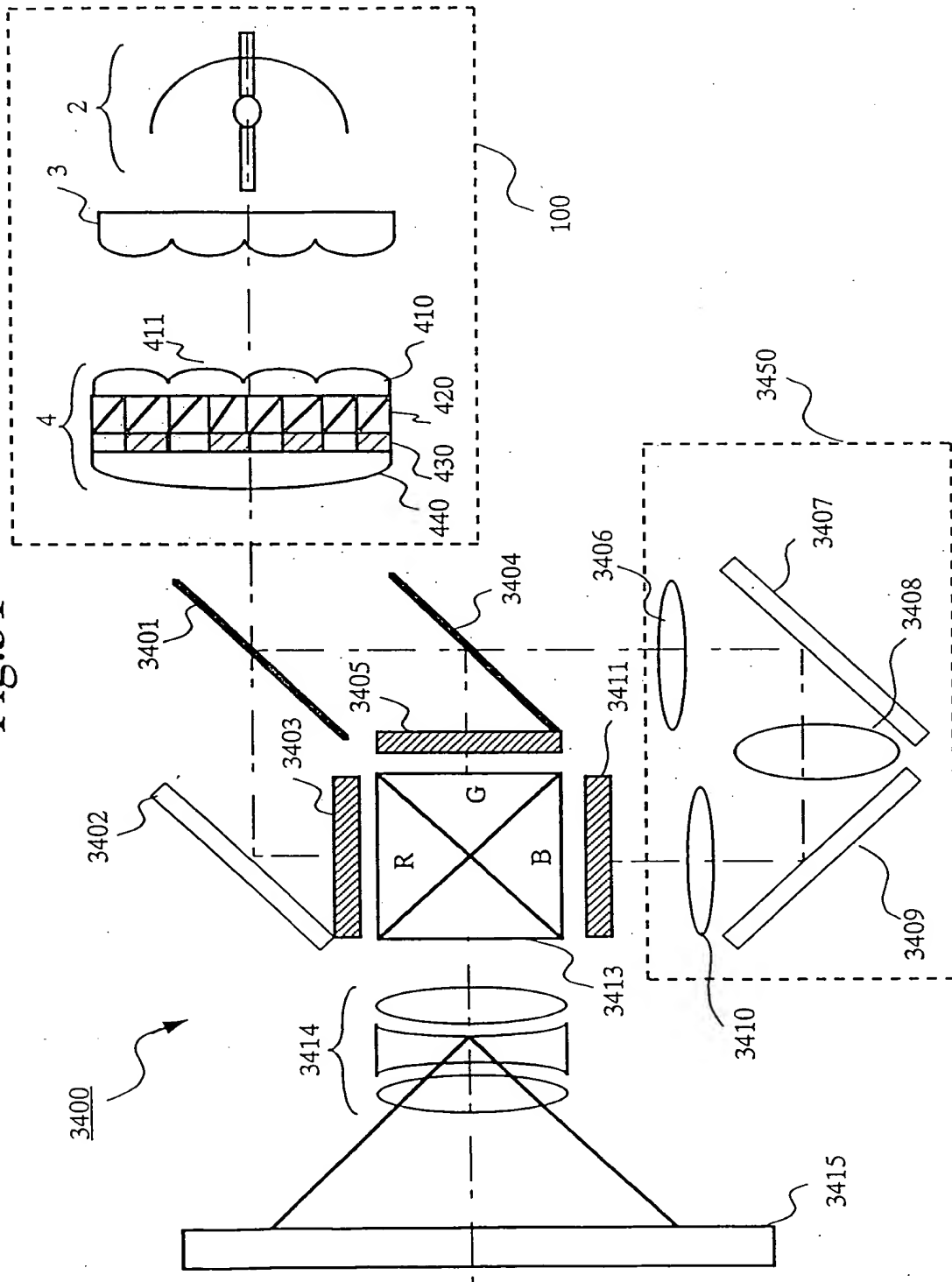


Fig. 31

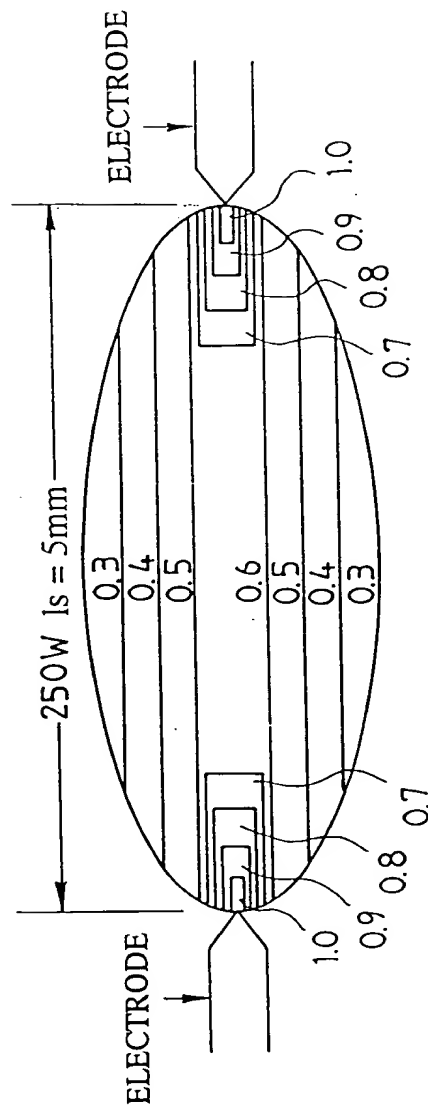


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Fig.32

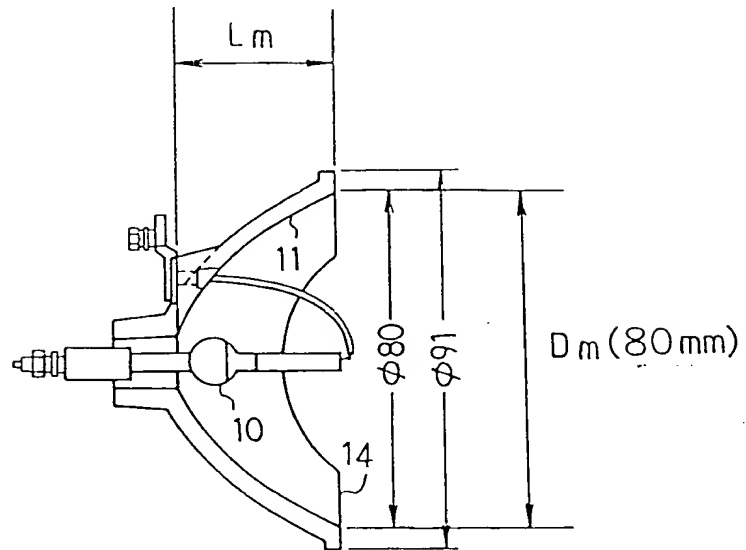
LAMP	METAL HALIDE	XENON	HALOGEN
LUMINOUS EFFICIENCY	80 lm/W	30 lm/W	30 lm/W
COLOR TEMPERATURE	9000 K	6500 K	3000 K
LIFE TIME	2000 H	500 H	100 H

Fig.33



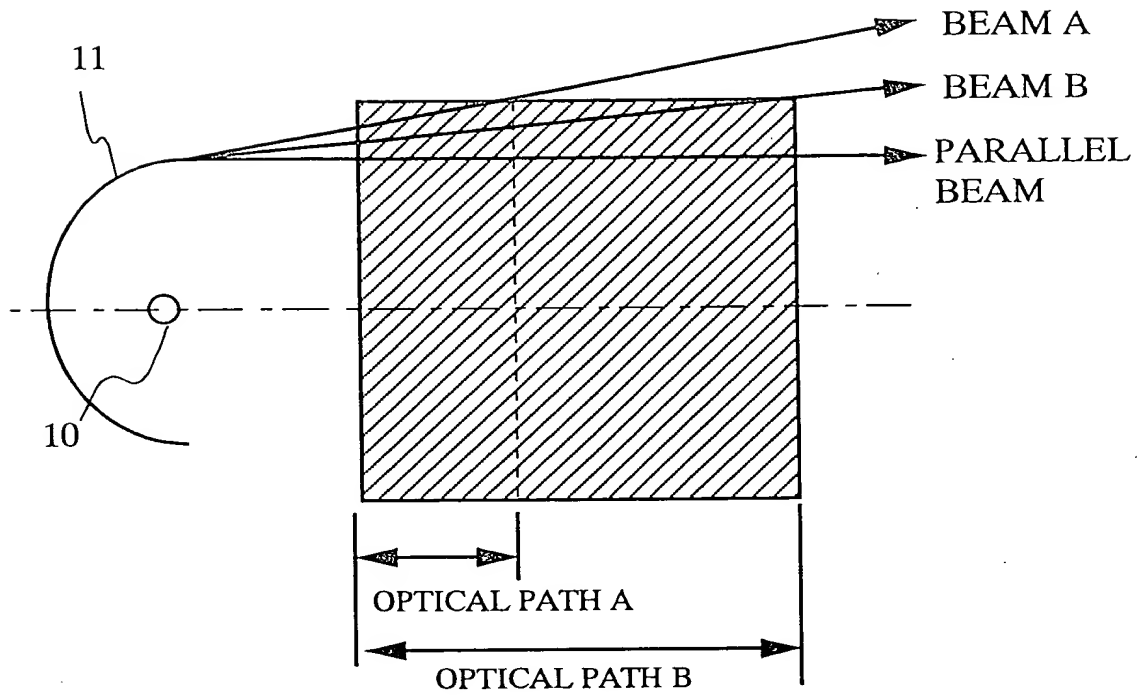
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Fig.34



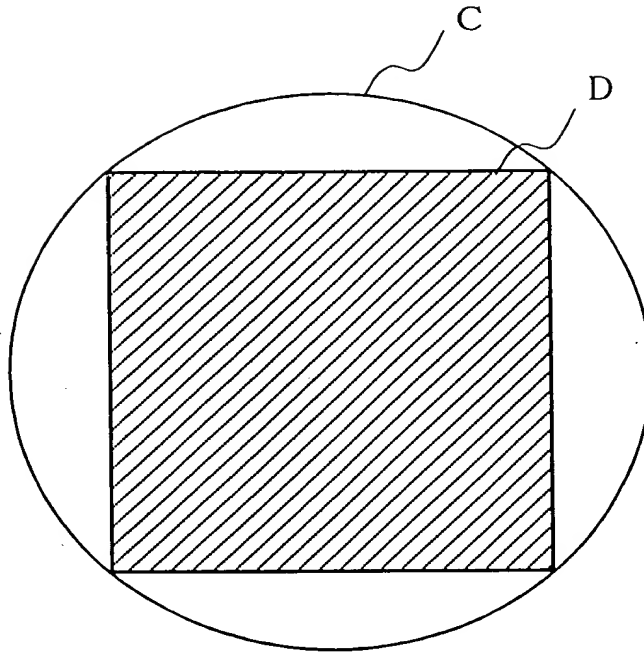
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Fig.35



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Fig.36



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Fig.37

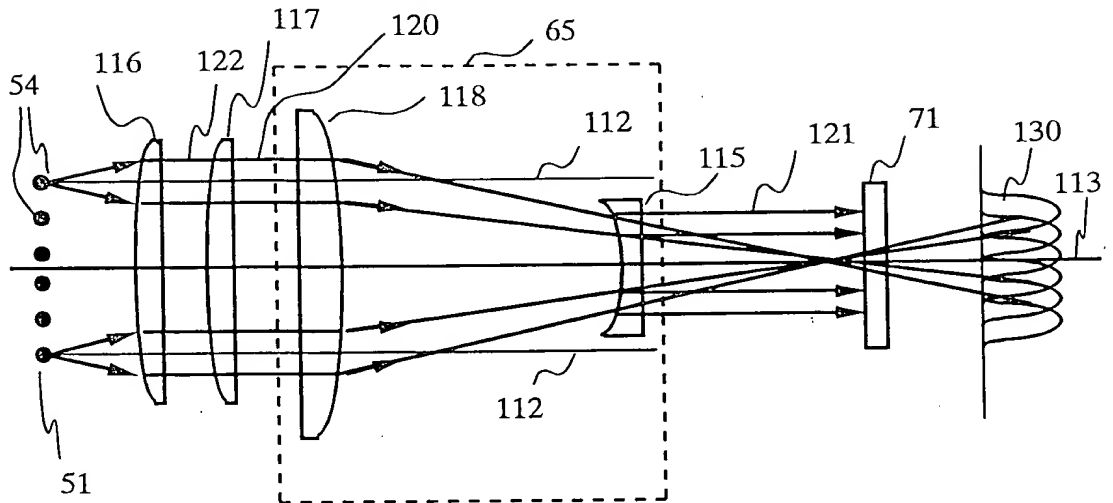
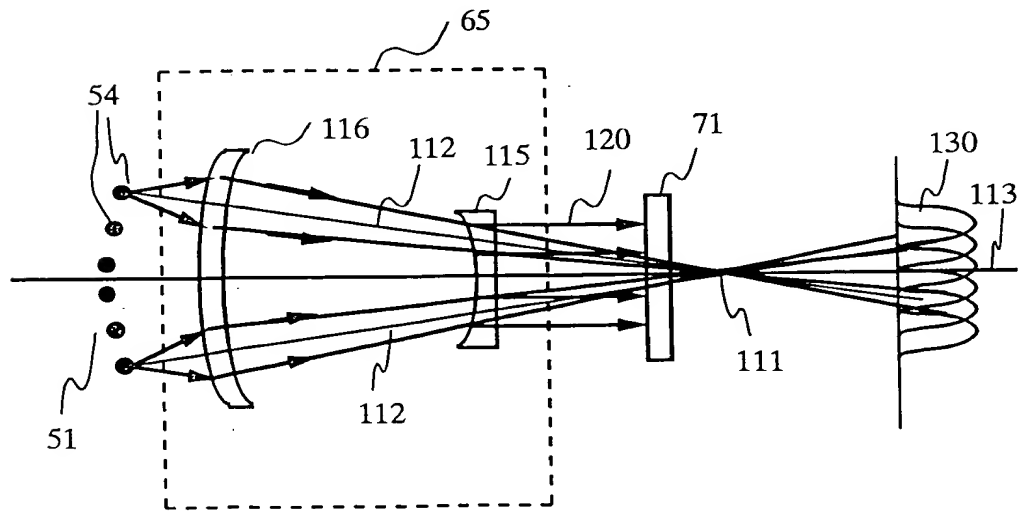


Fig.38



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Fig.39

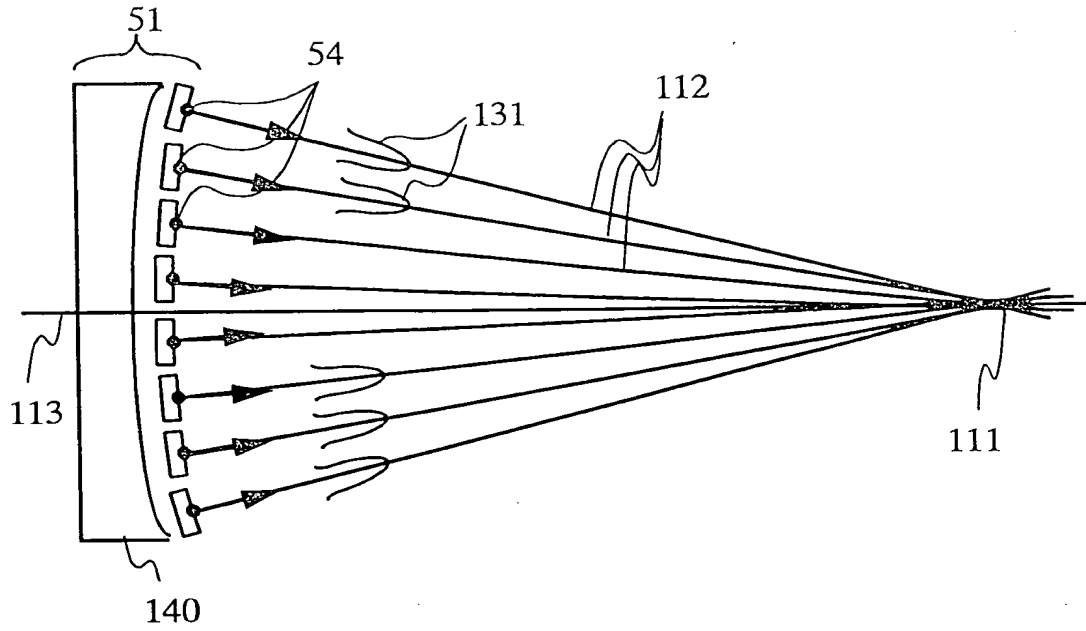
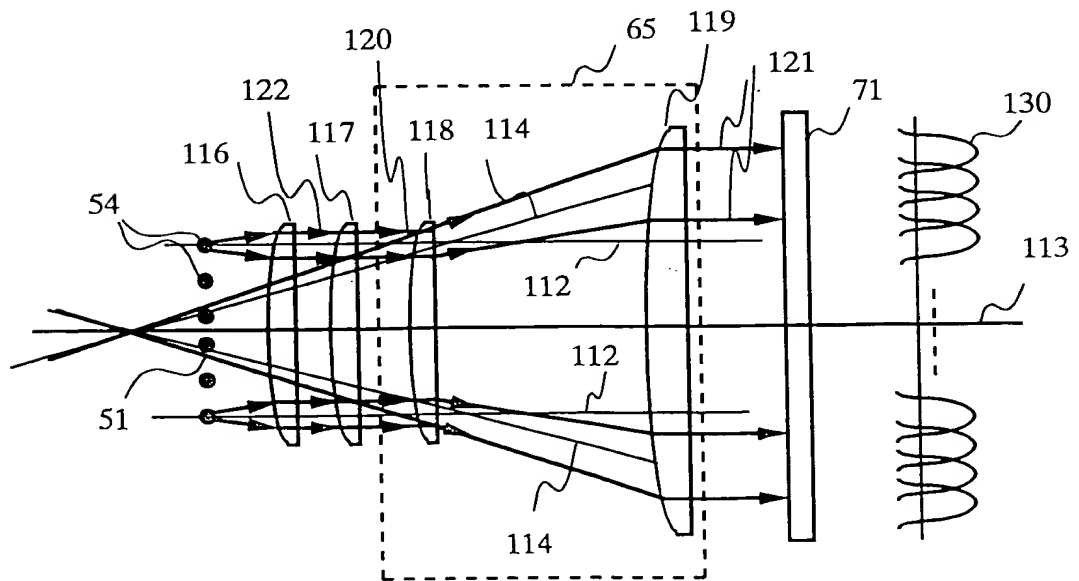


Fig.40



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Fig.41

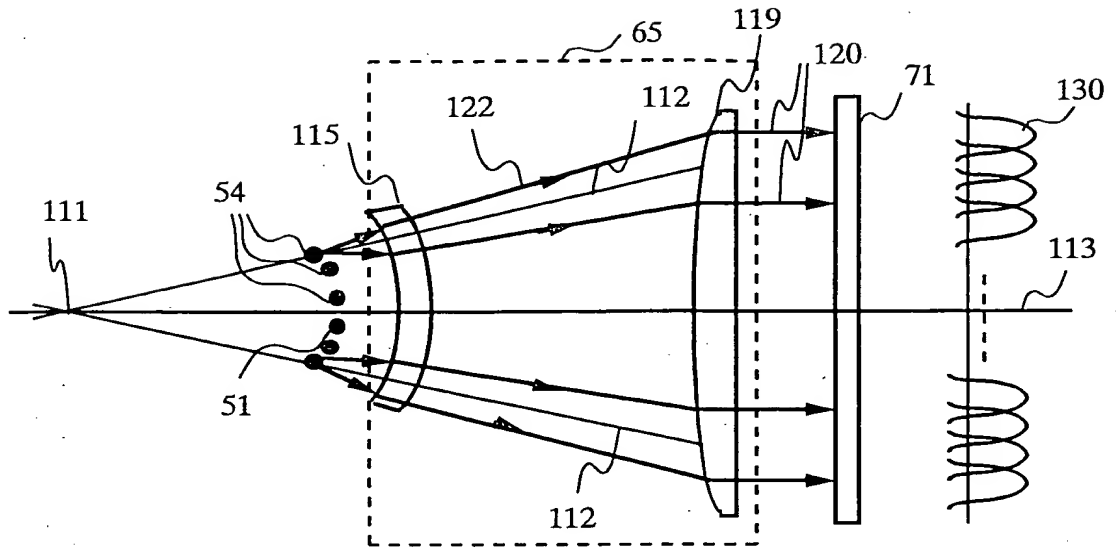


Fig.42

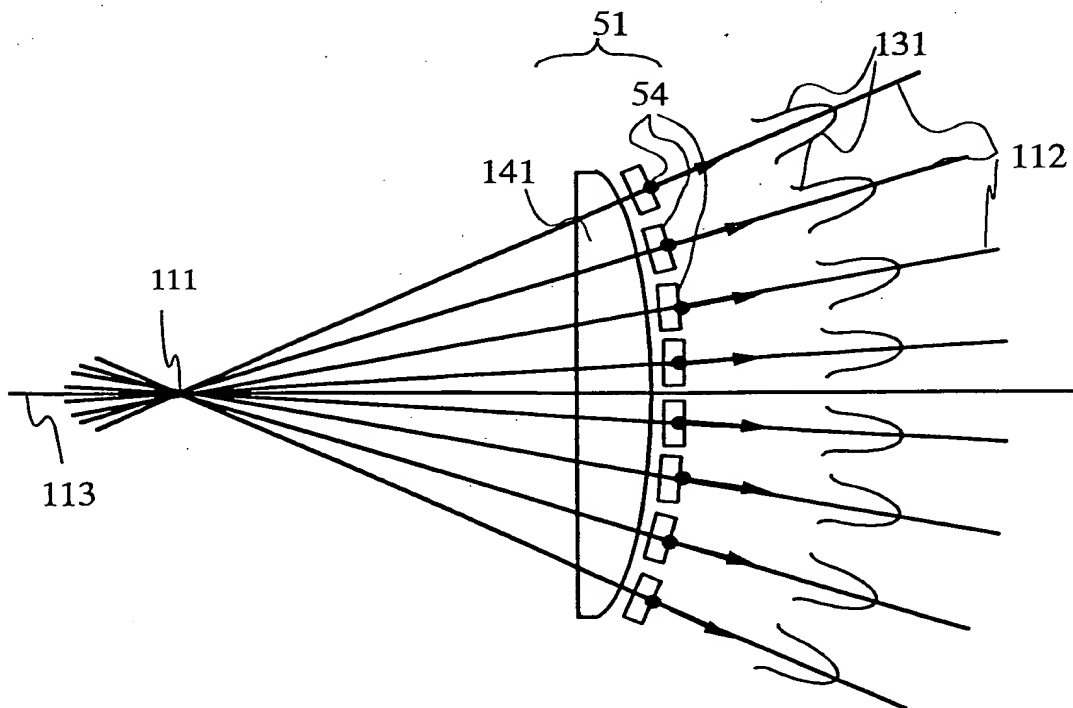


Fig.43

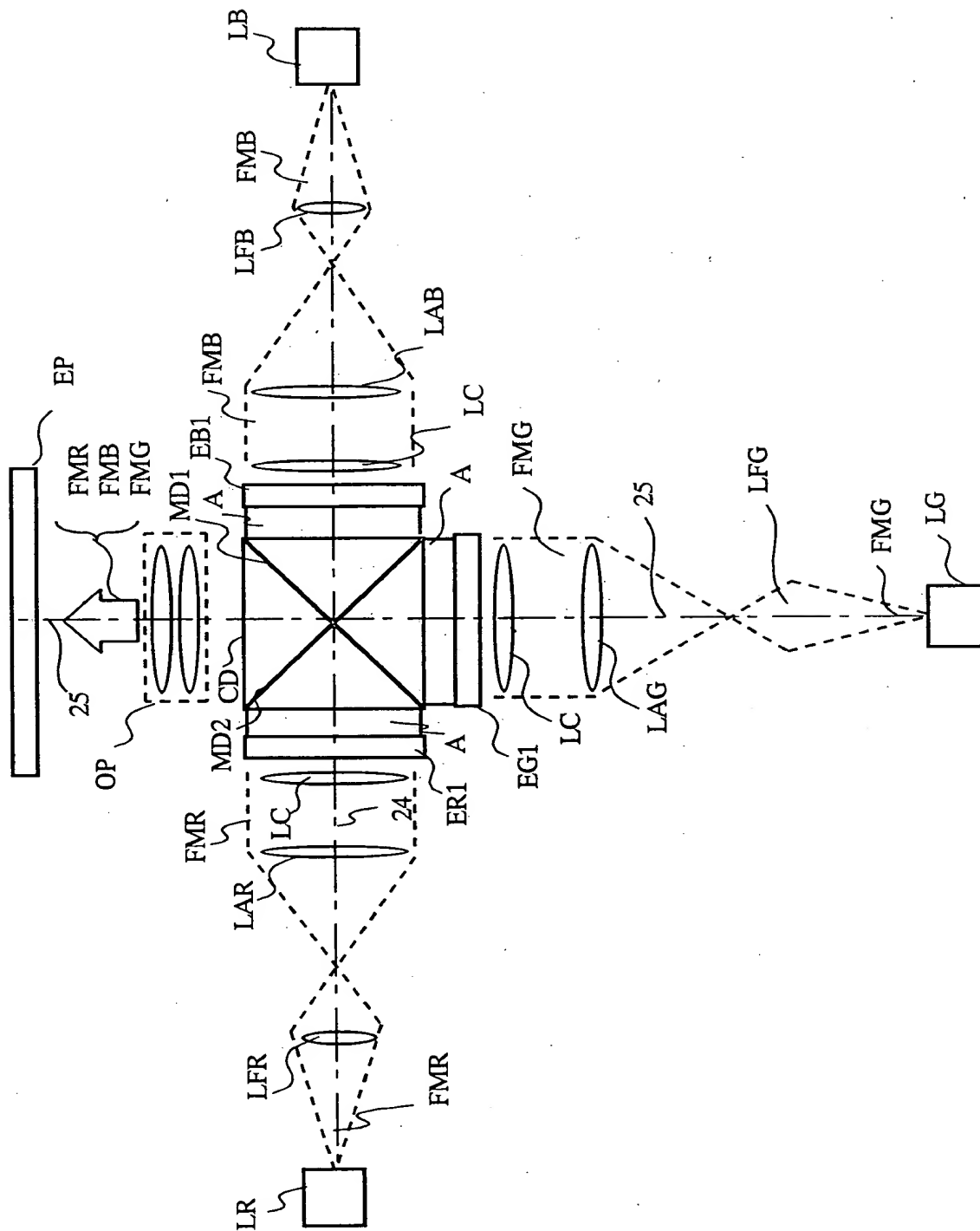


Fig.44

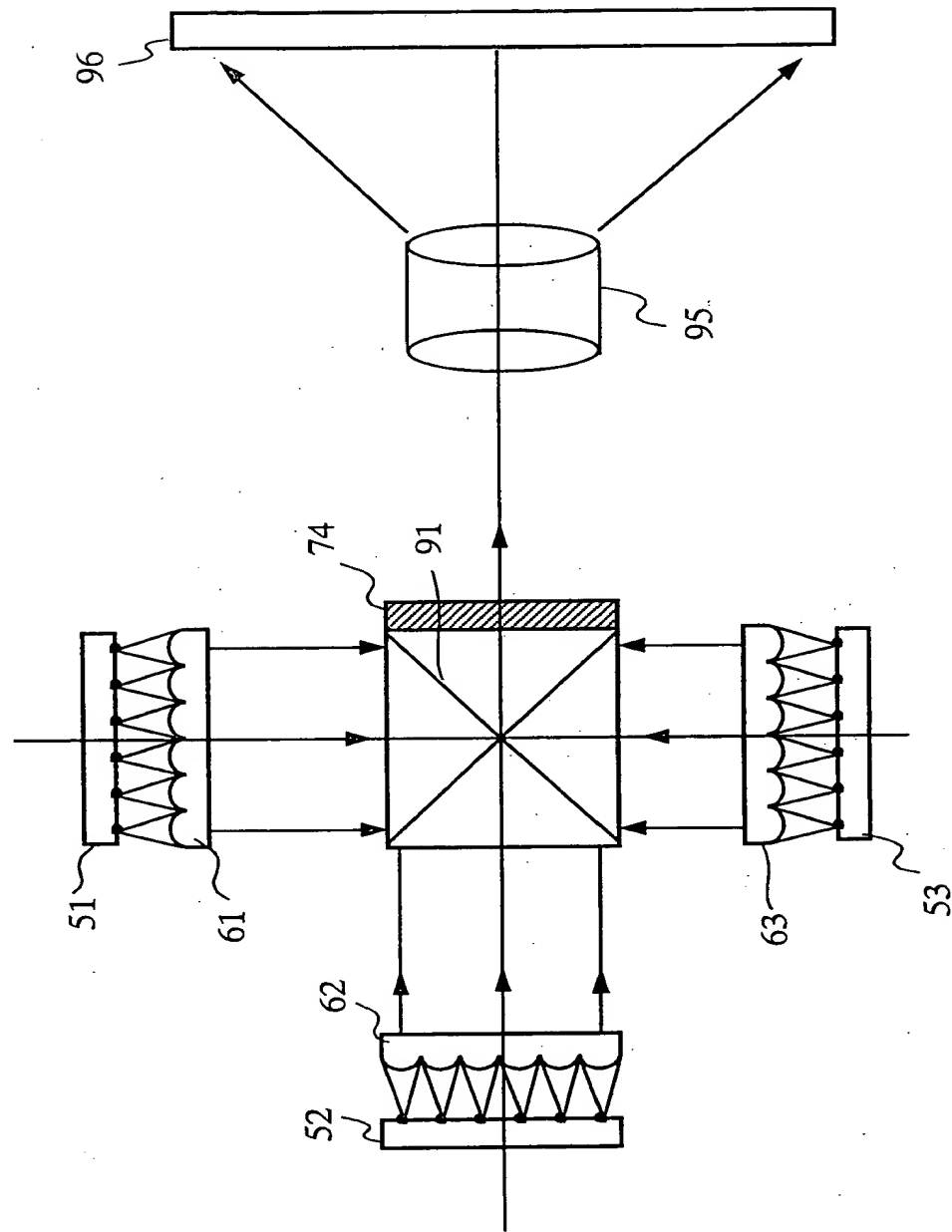


Fig.45

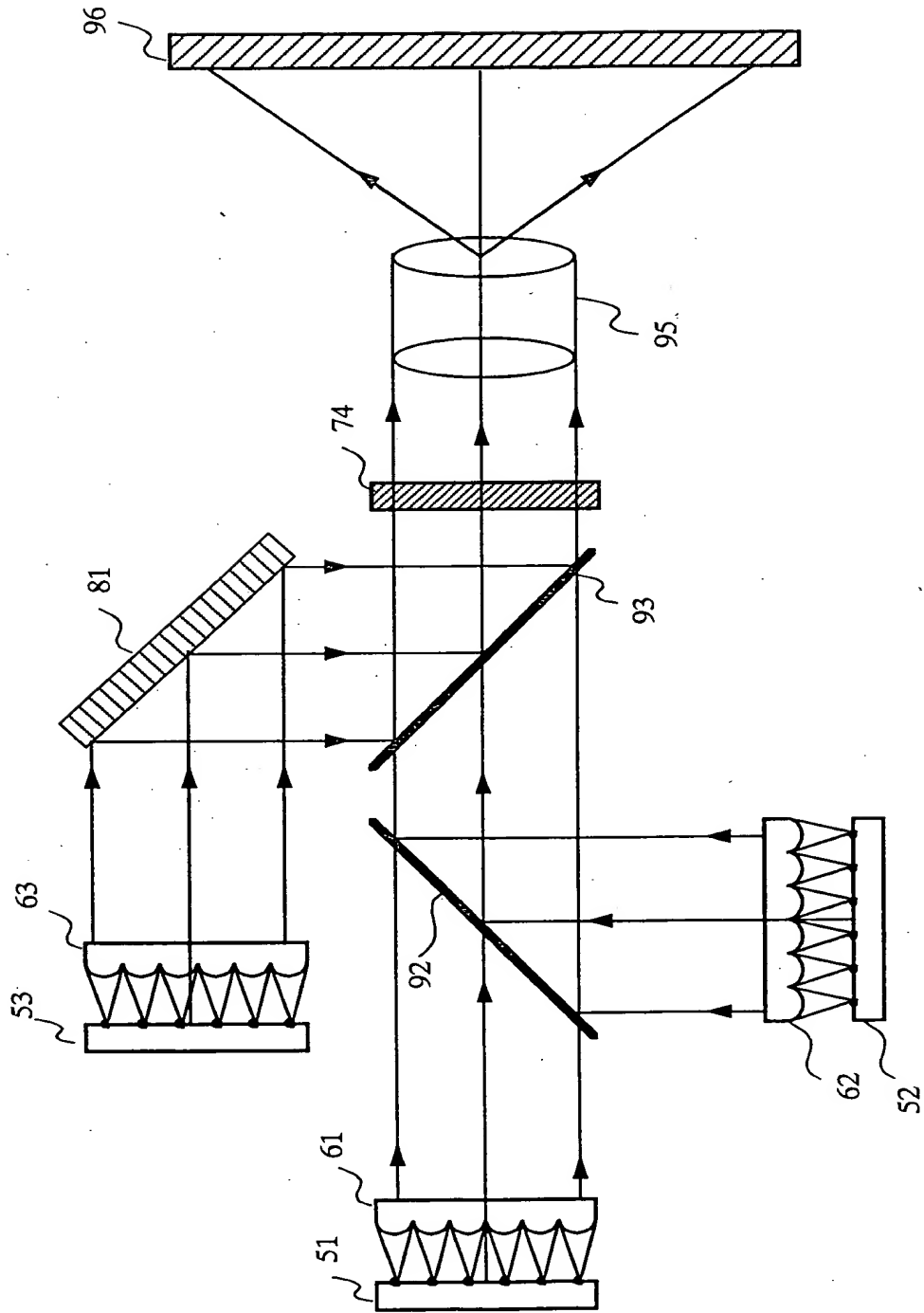
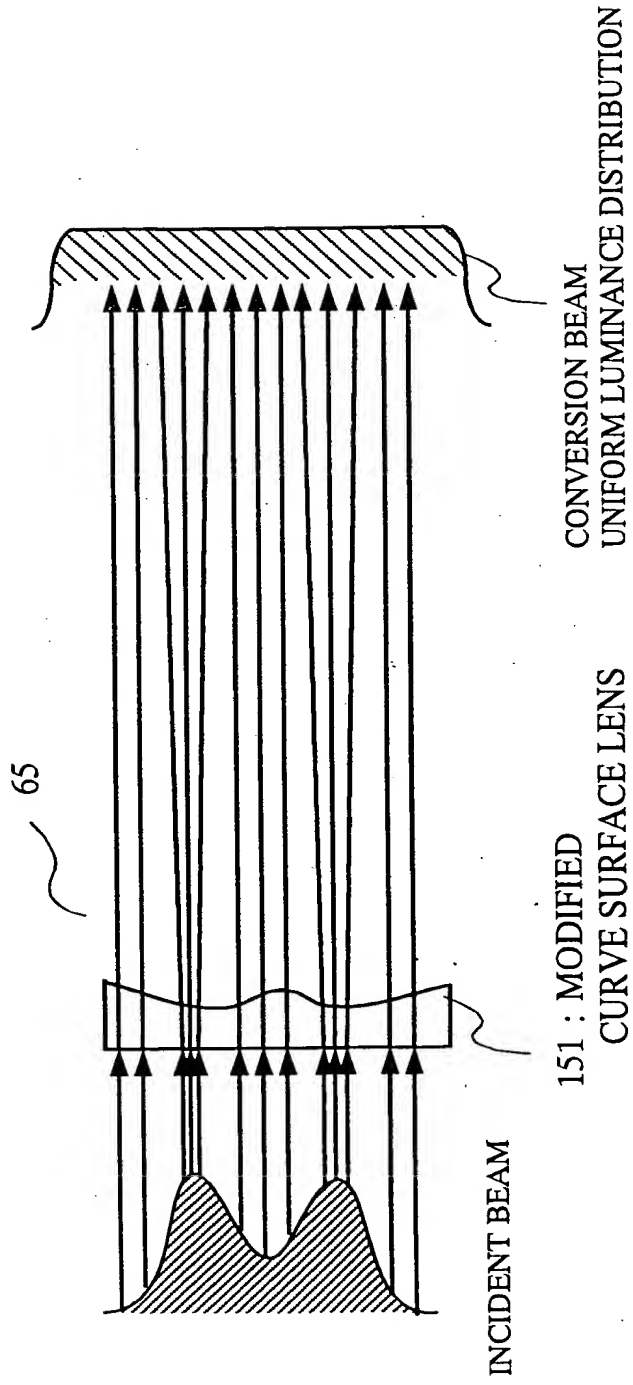
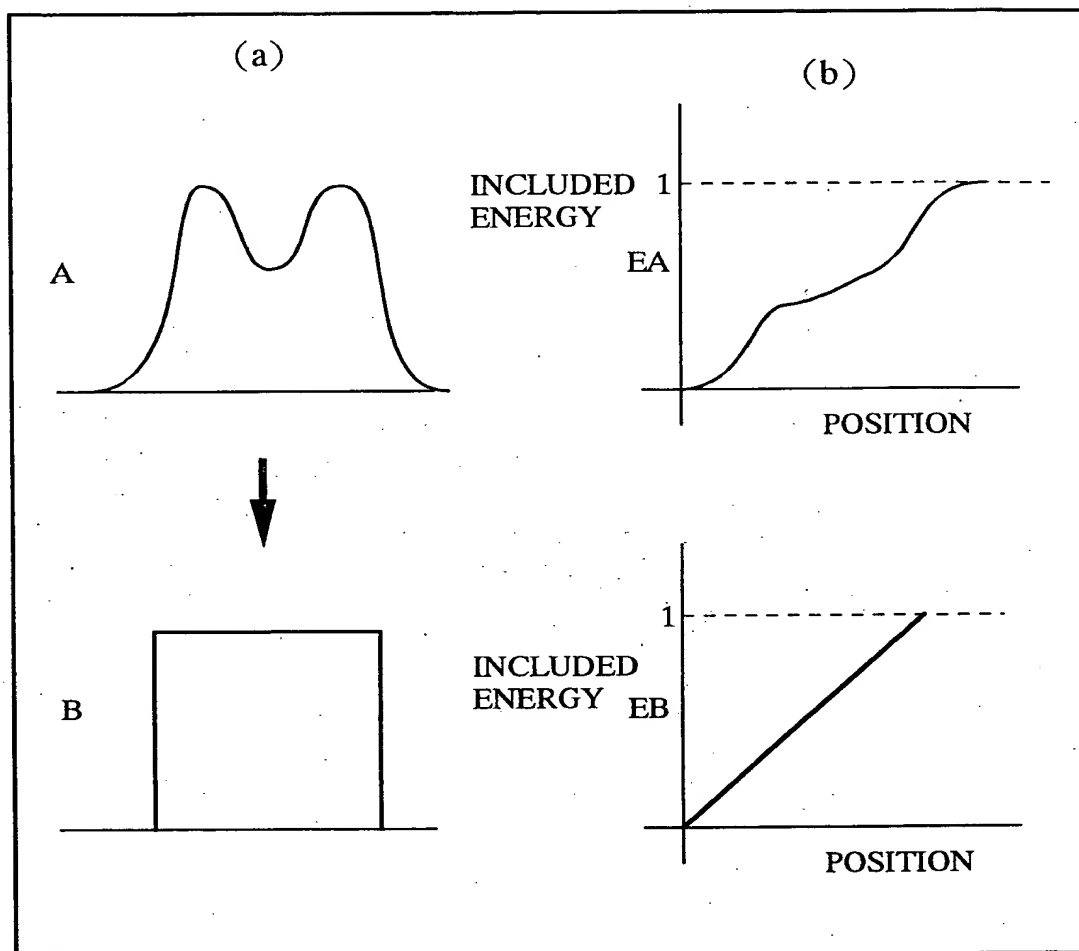


Fig.46



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Fig.47



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Fig.48

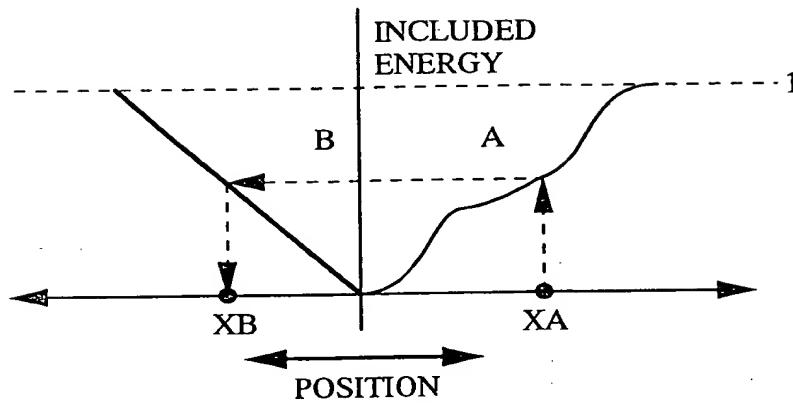
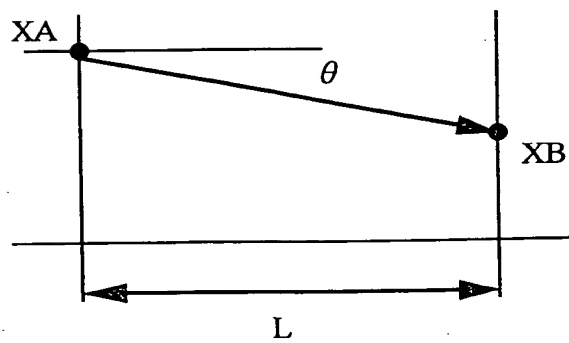
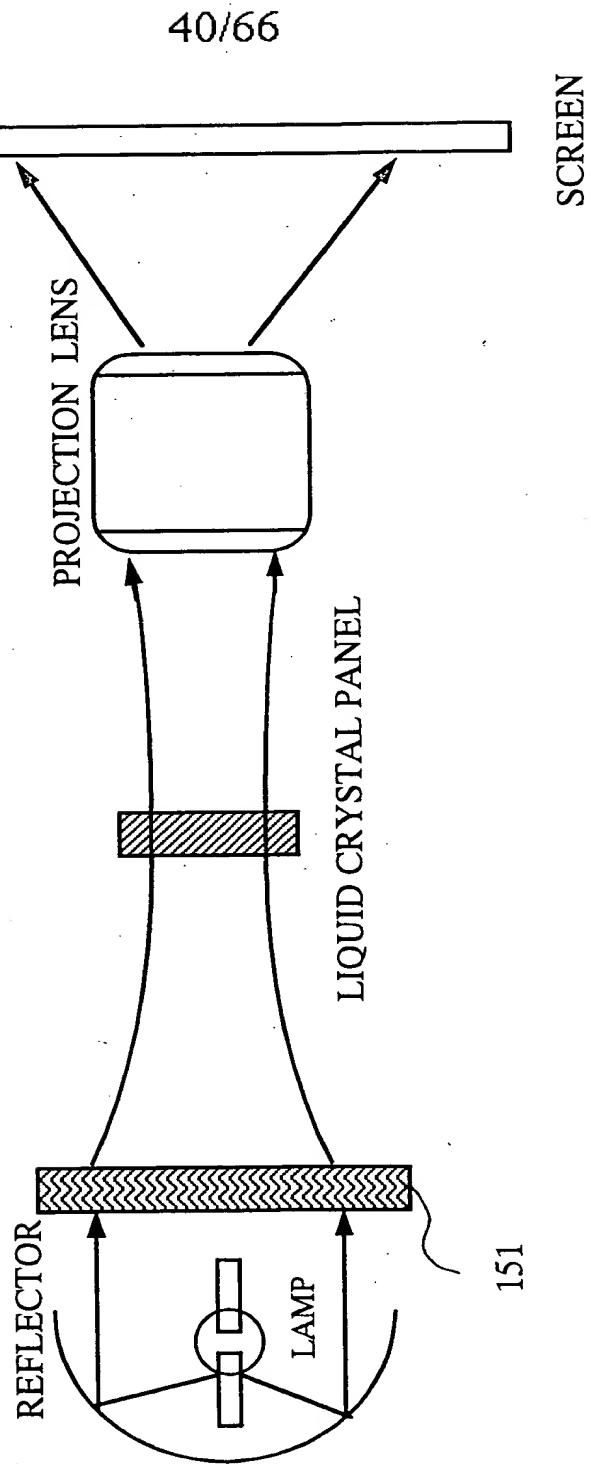


Fig.49



$$\tan \theta = \frac{X_A - X_B}{L} = \frac{X_A - T(X_A)}{L} = \theta(X_A, L)$$

Fig.50



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Fig.51

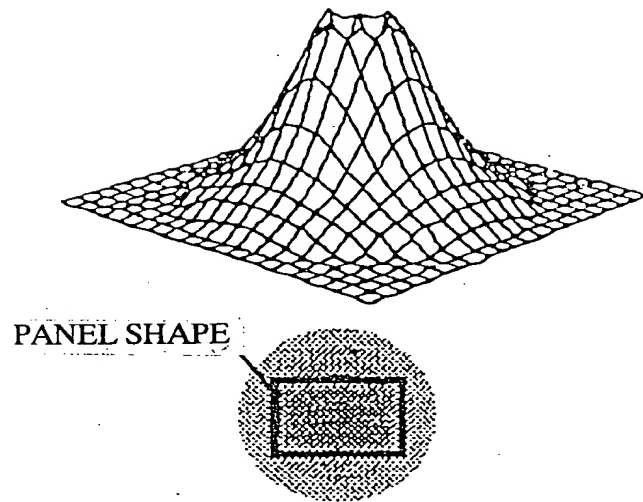
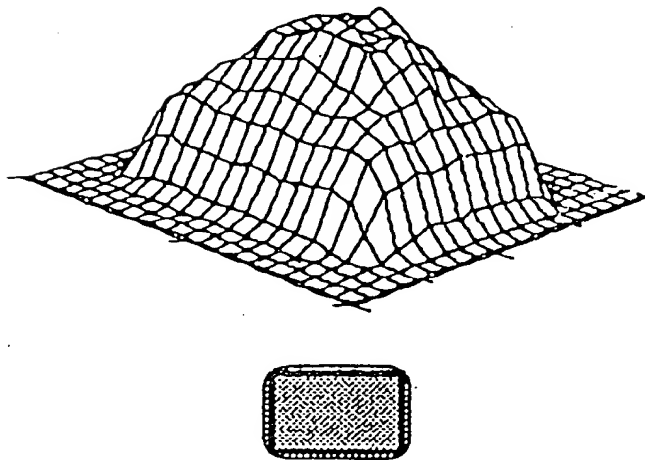


Fig.52



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Fig.53

LAMP 150W、 USING 1.3" COLOR PANEL	REGULAR LENS	MODIFIED CURVE SURFACE LENS
TOTAL LUMINOUS FLUX AMOUNT [lm]	121	261
CENTER ILLUMINANCE[Lux]	410	731
CIRCUMFERENTIAL ILLUMINANCE [Lux]	131	438
ILLUMINANCE RATIO OF CENTER TO CIRCUMFERENCE [%] (UNIFORMITY)	32	60

Fig.54

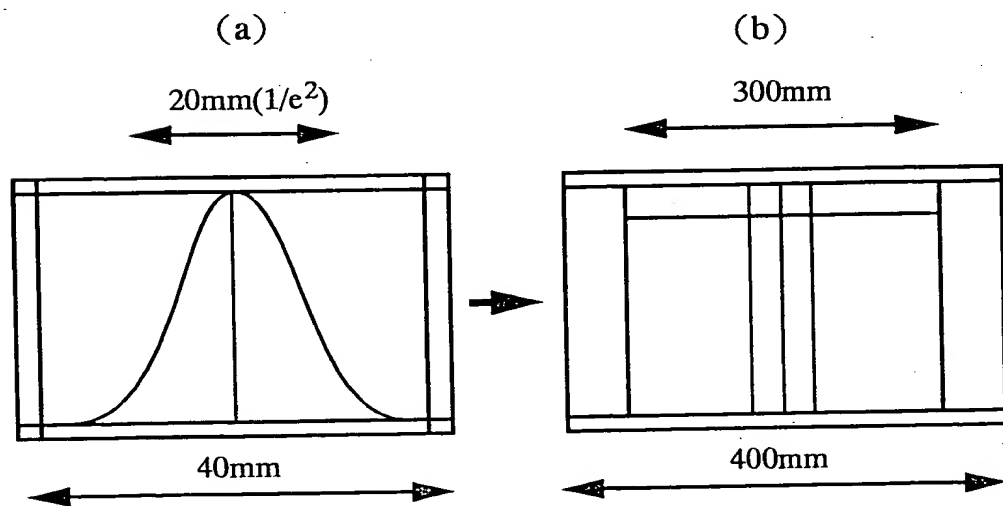


Fig.55

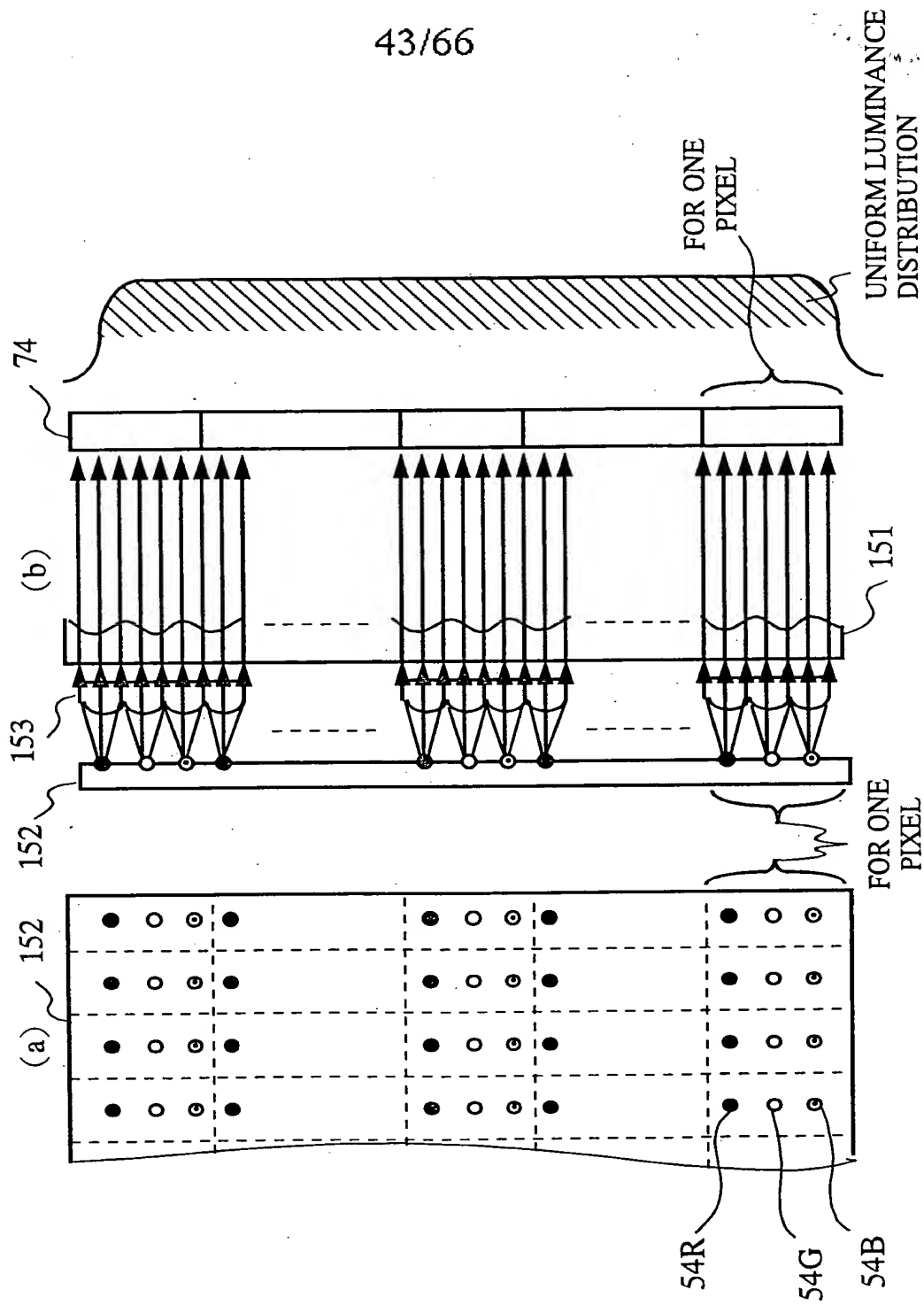


Fig.56

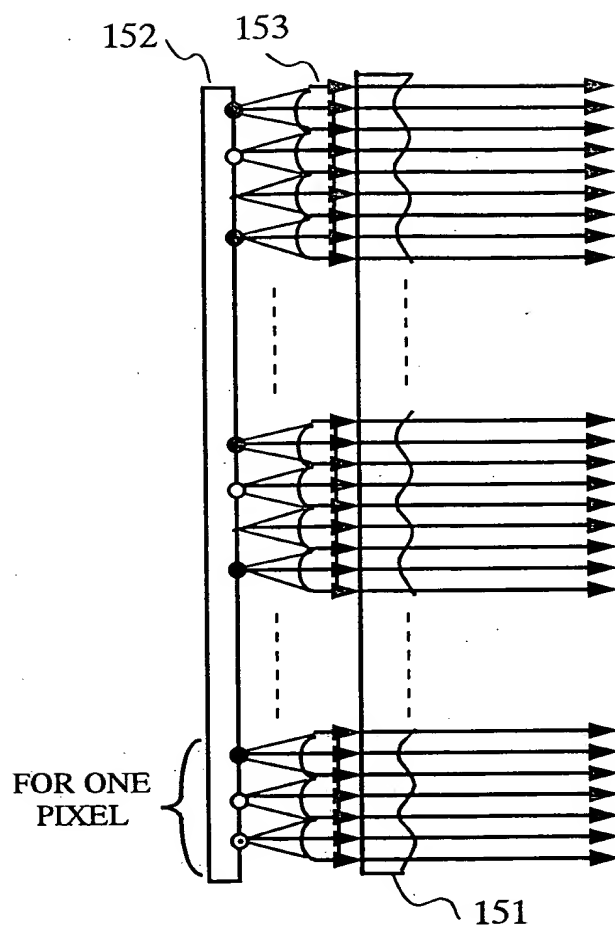


Fig.57

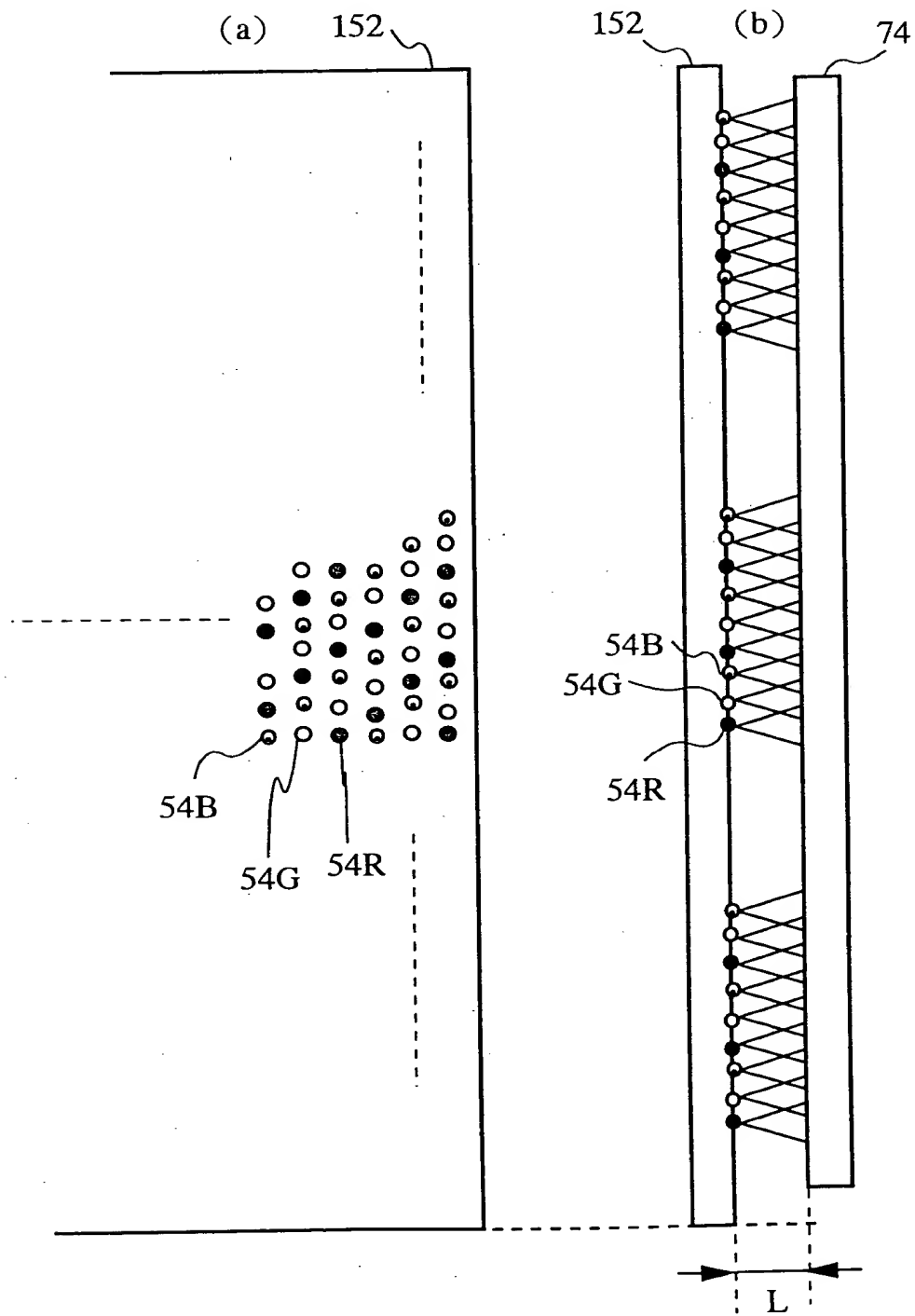
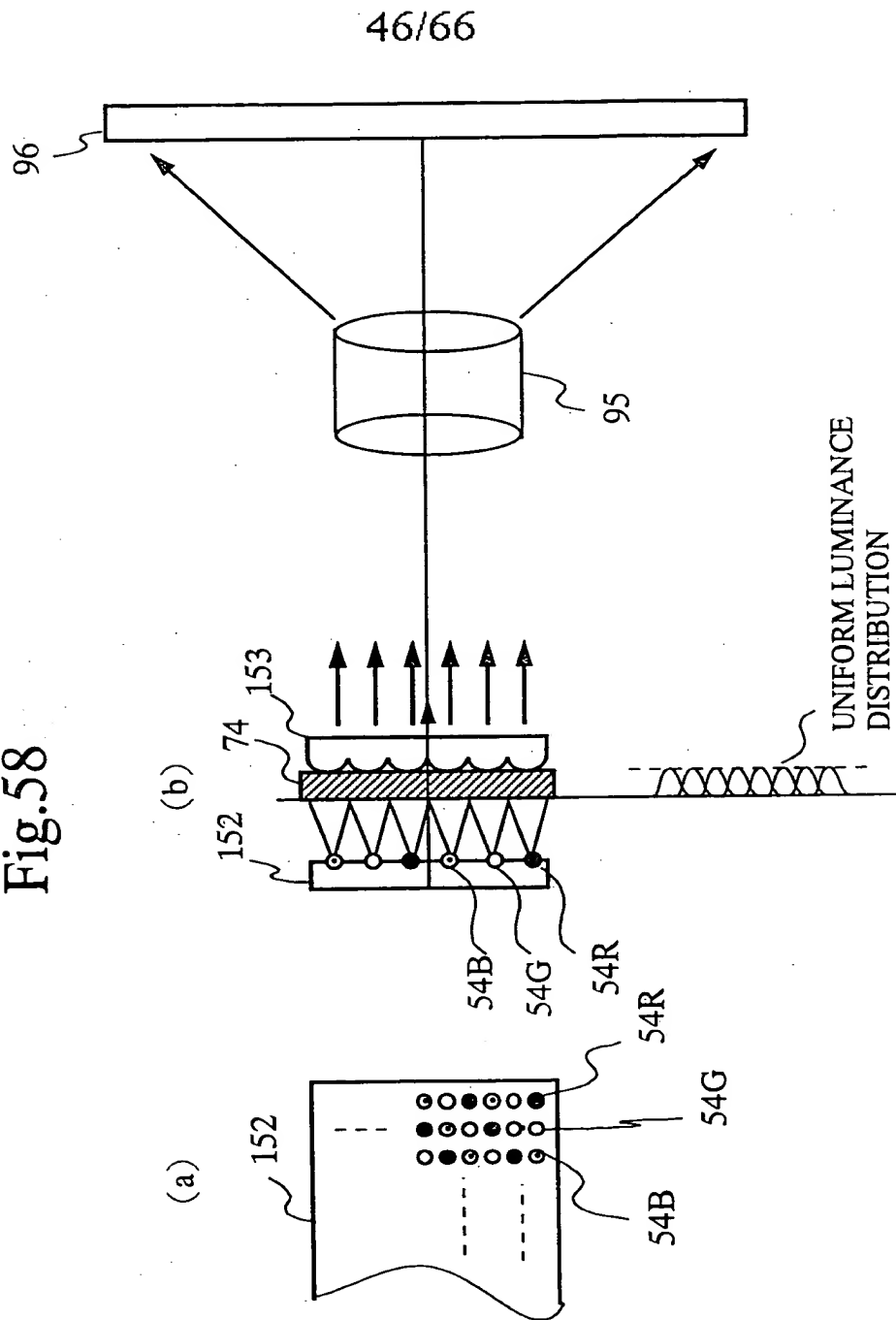


Fig.58



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Fig.59

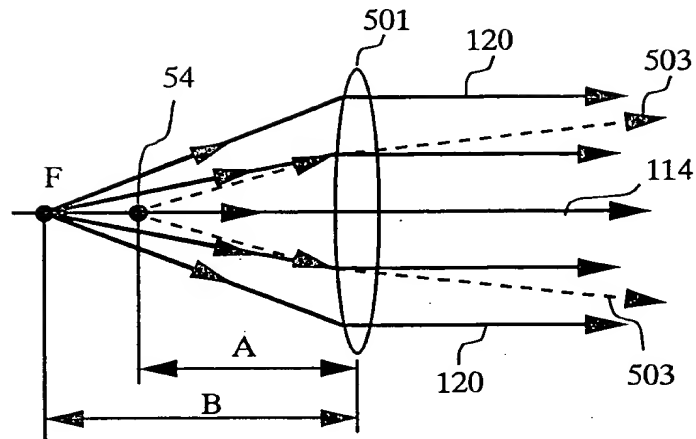


Fig.60

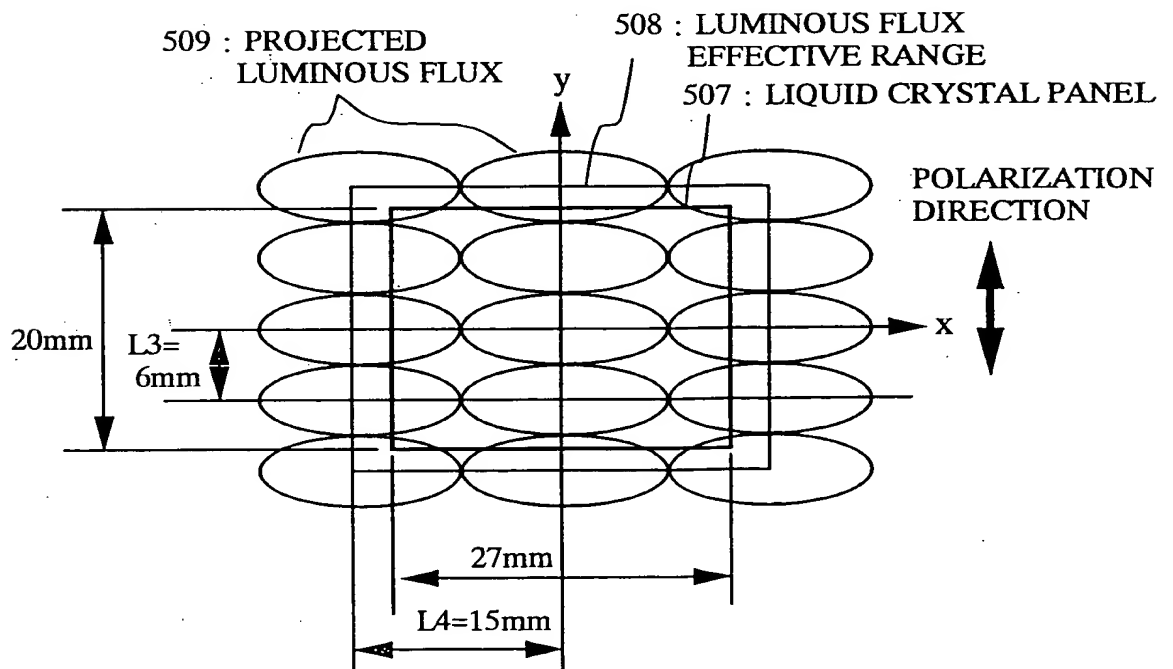


Fig.61

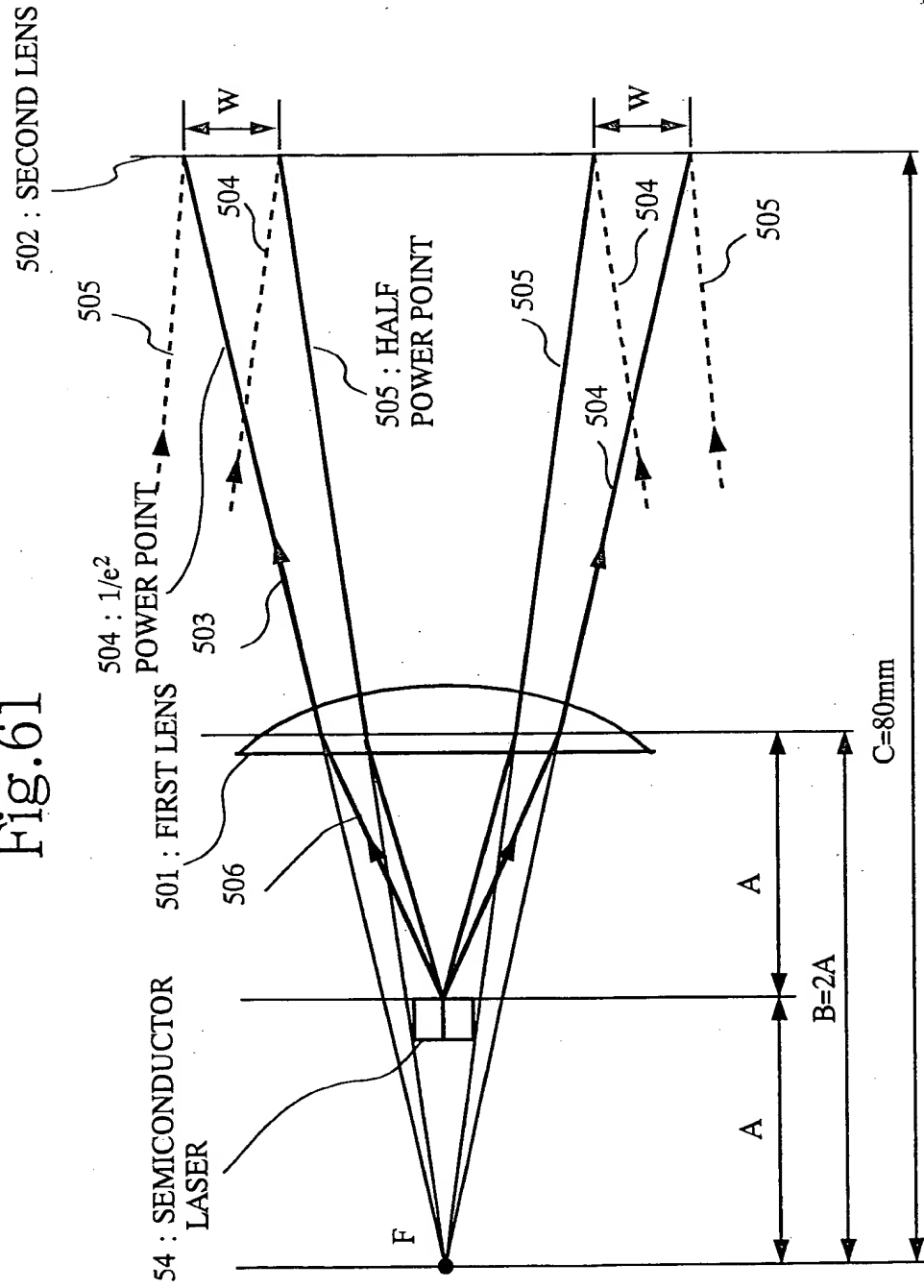


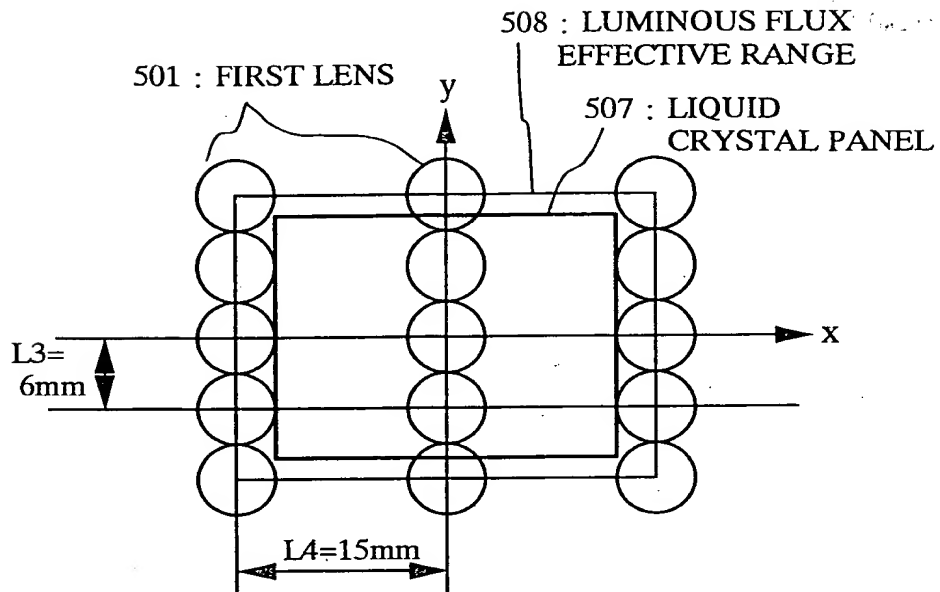
Fig.62

DESIGN EXAMPLE (UNIT : mm)

No.	A	B	FIRST LENS			SECOND LENS	
			NARROW ANGLE		WIDE ANGLE	NARROW ANGLE	WIDE ANGLE
			HALF(L1)	$1/e^2$	HALF(L2)	HALF(L3)	HALF(L4)
1	9	18	1.333	2.26	3.371	5.733	15
2	23	46	3.41	5.79	8.8	6	

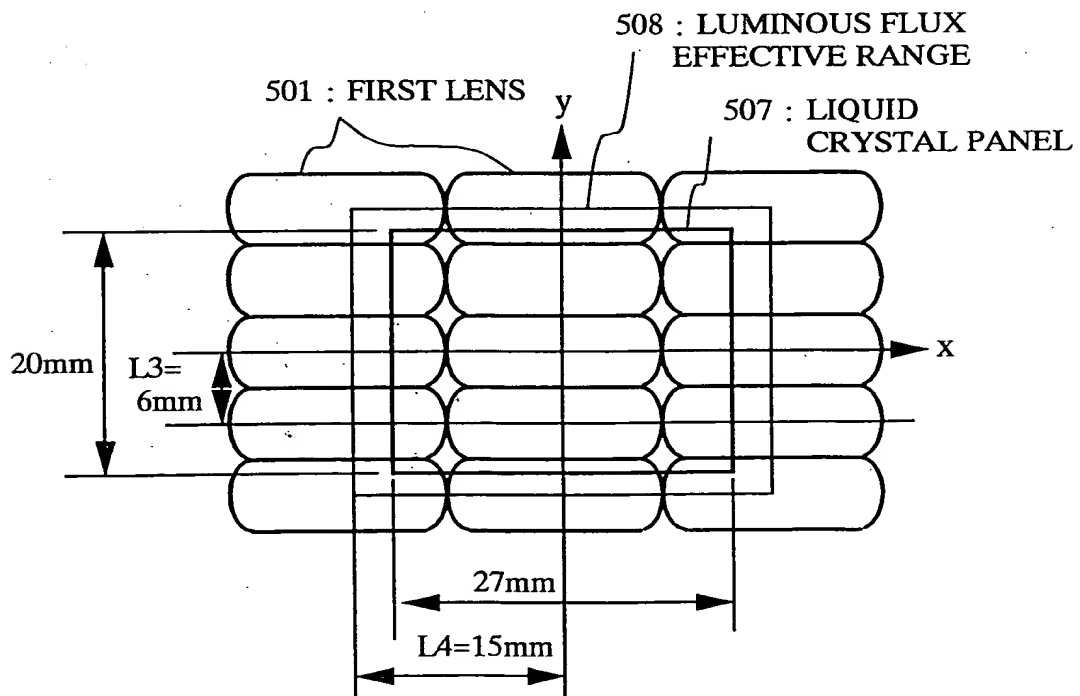
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Fig.63



No.1 DESIGN , FIRST LENS ALLOCATION(CIRCLE LENS)

Fig.64



No.2 DESIGN , FIRST LENS ALLOCATION
(A PART OF CIRCLE LENS BEING CUT)

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Fig.65

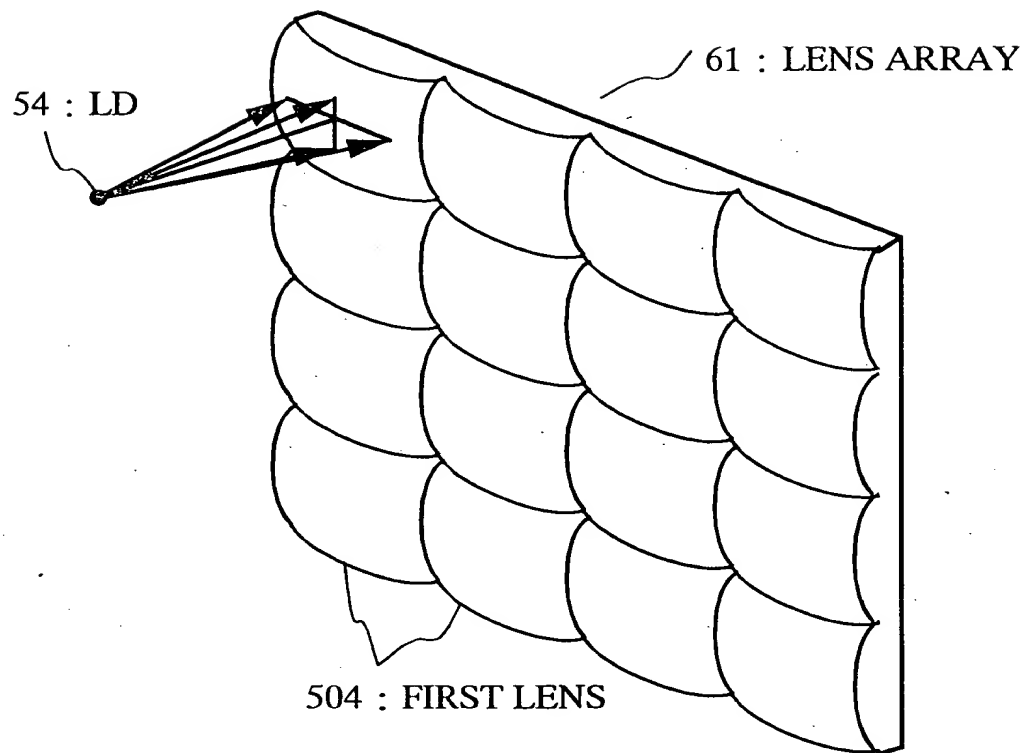


Fig.66

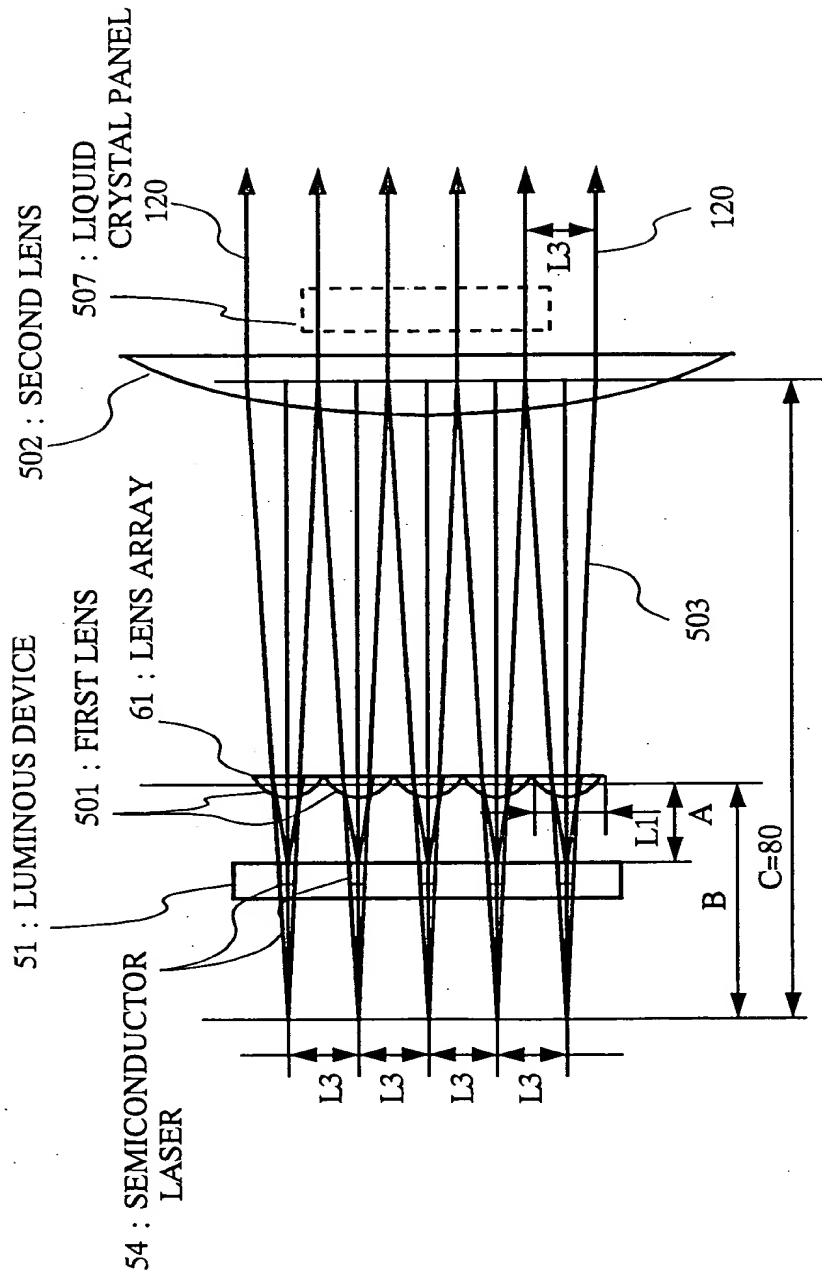
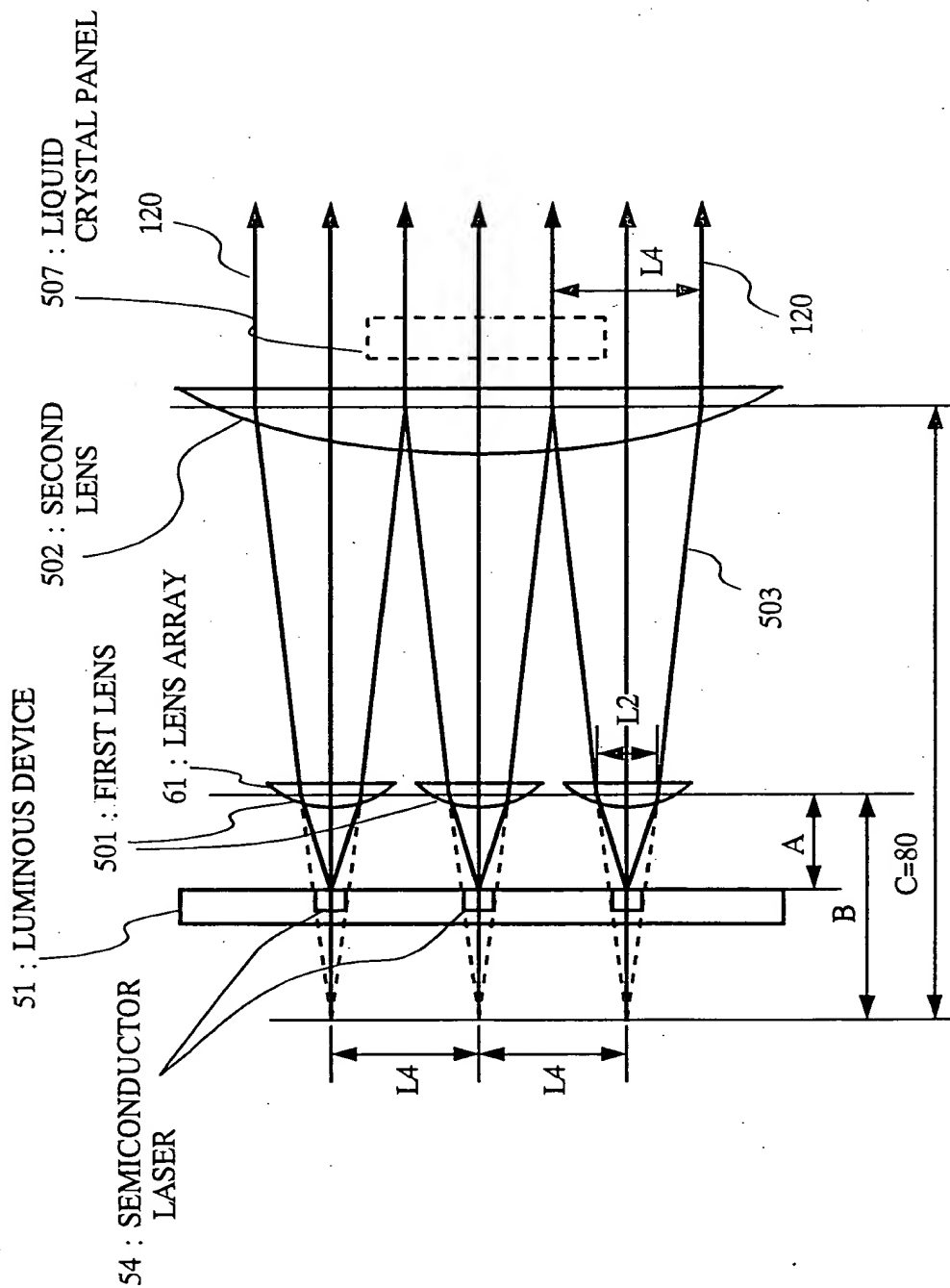


Fig.67



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Fig.68

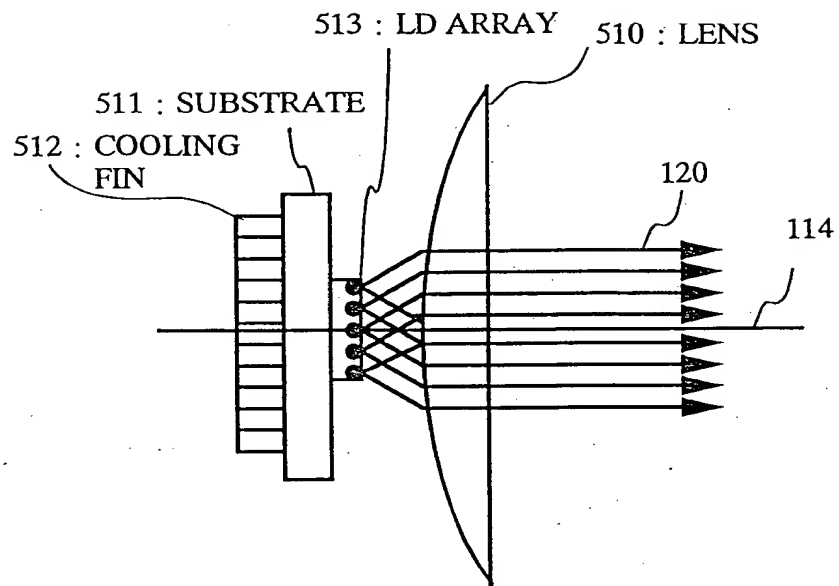
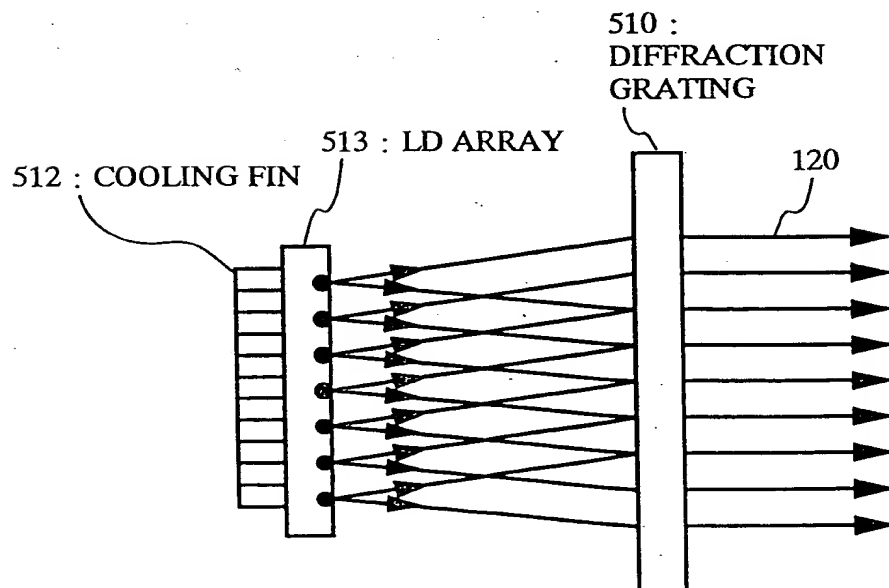


Fig.69



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Fig.70

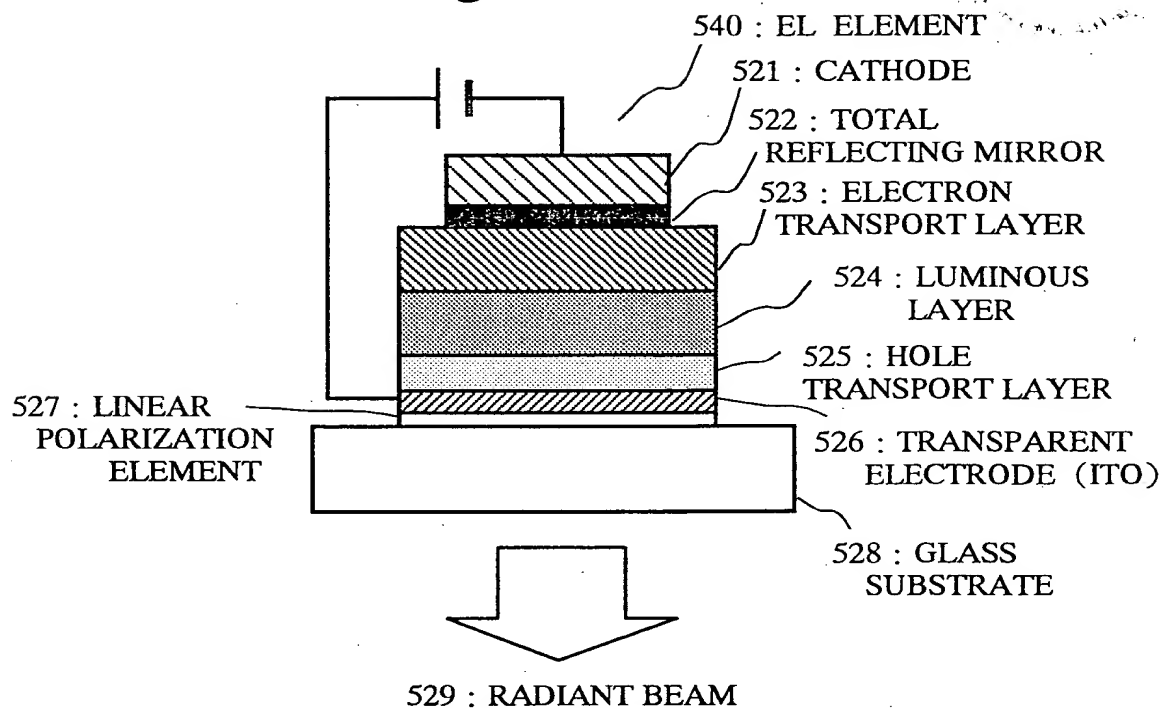
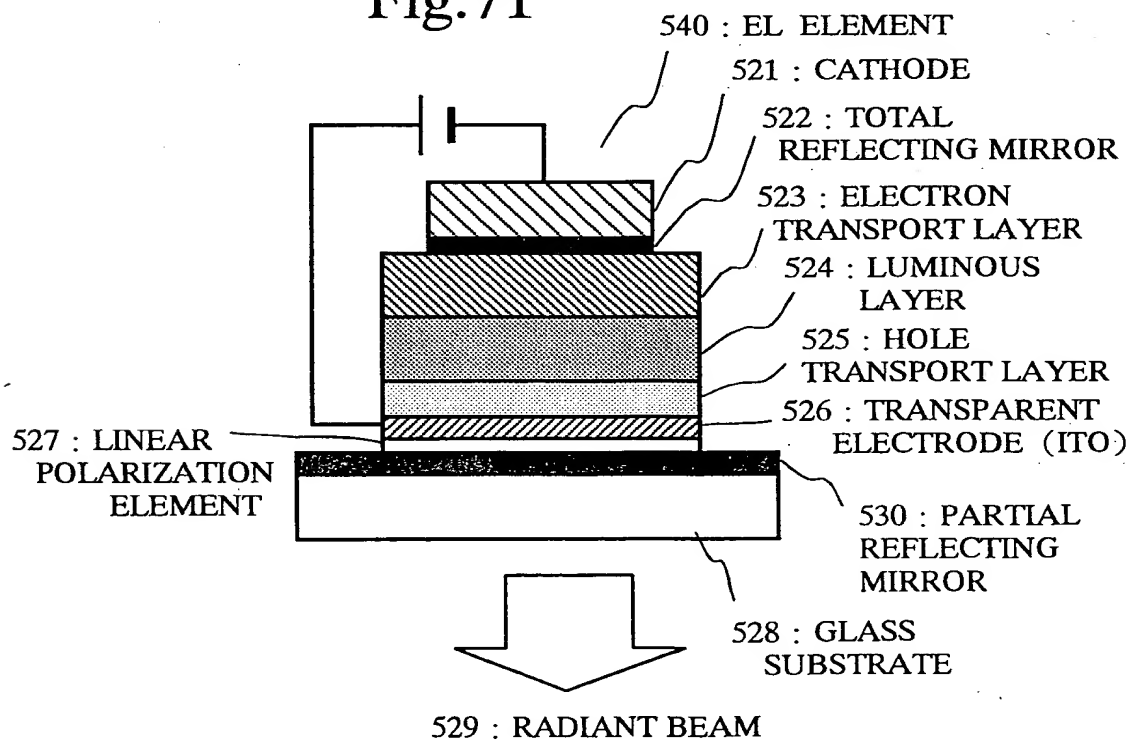


Fig.71



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Fig.72

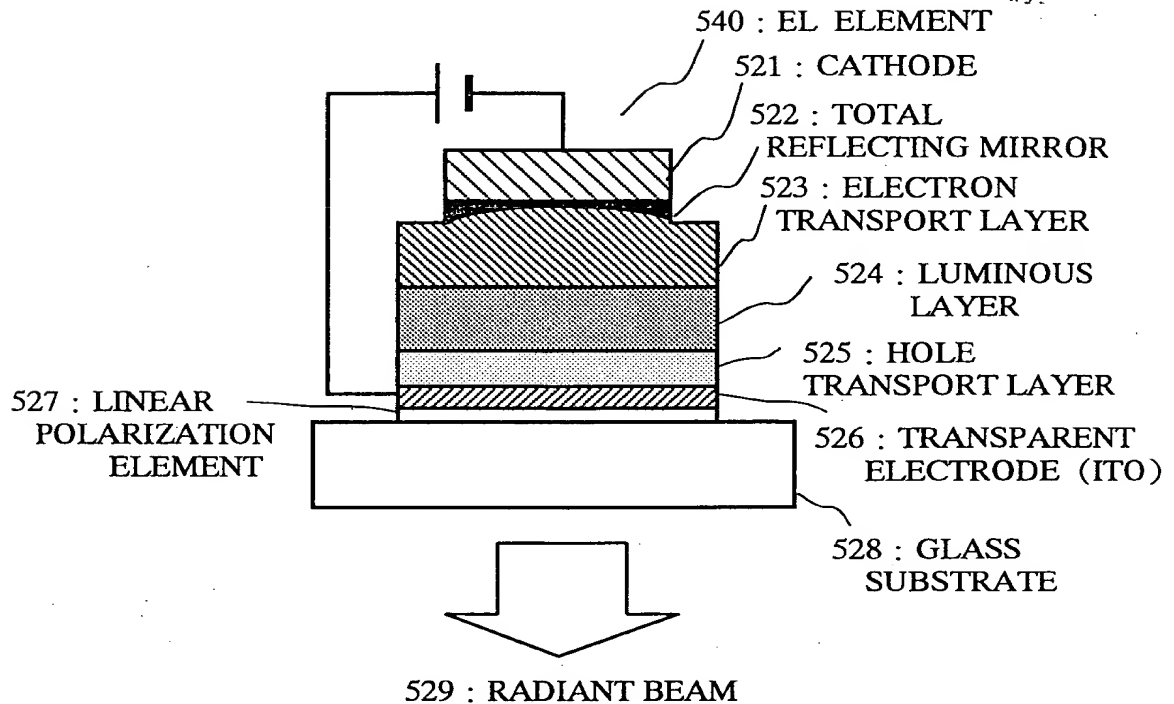
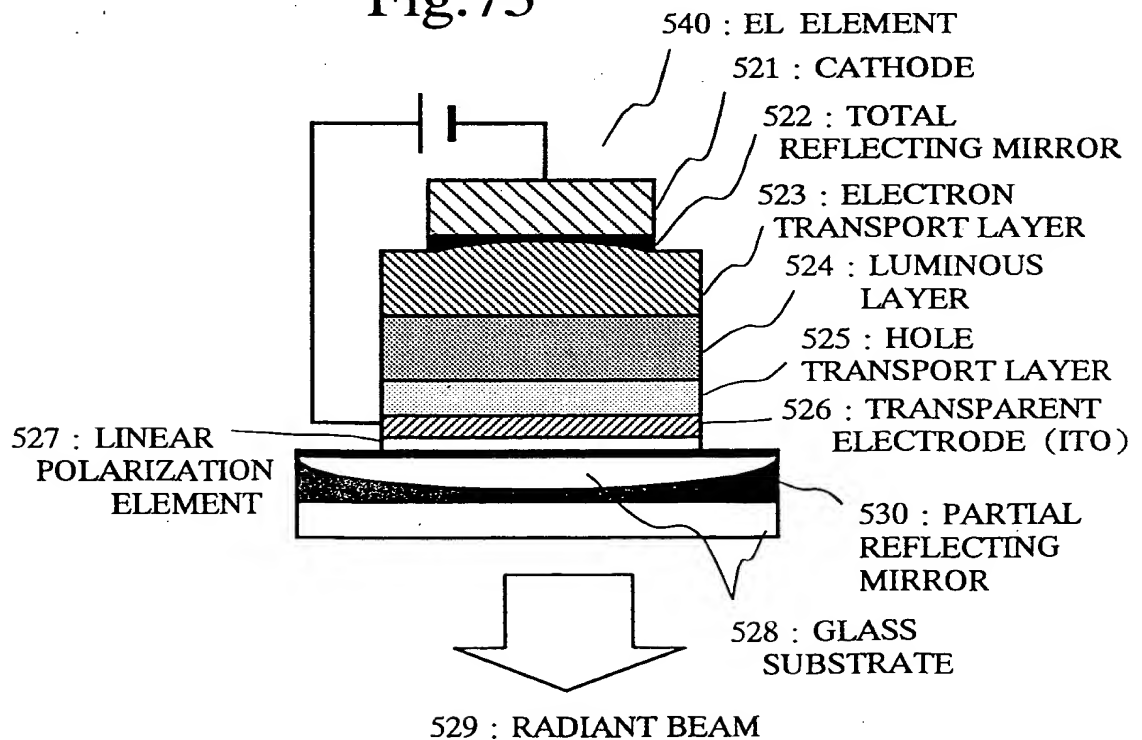


Fig.73



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Fig.74

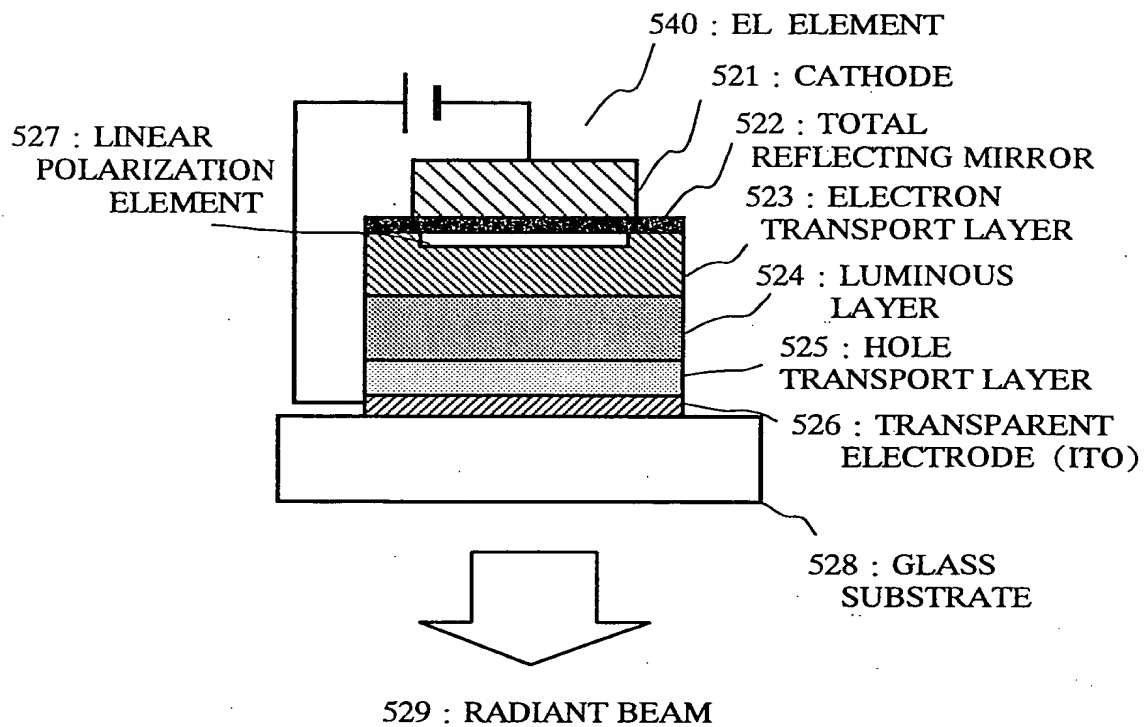


Fig.75

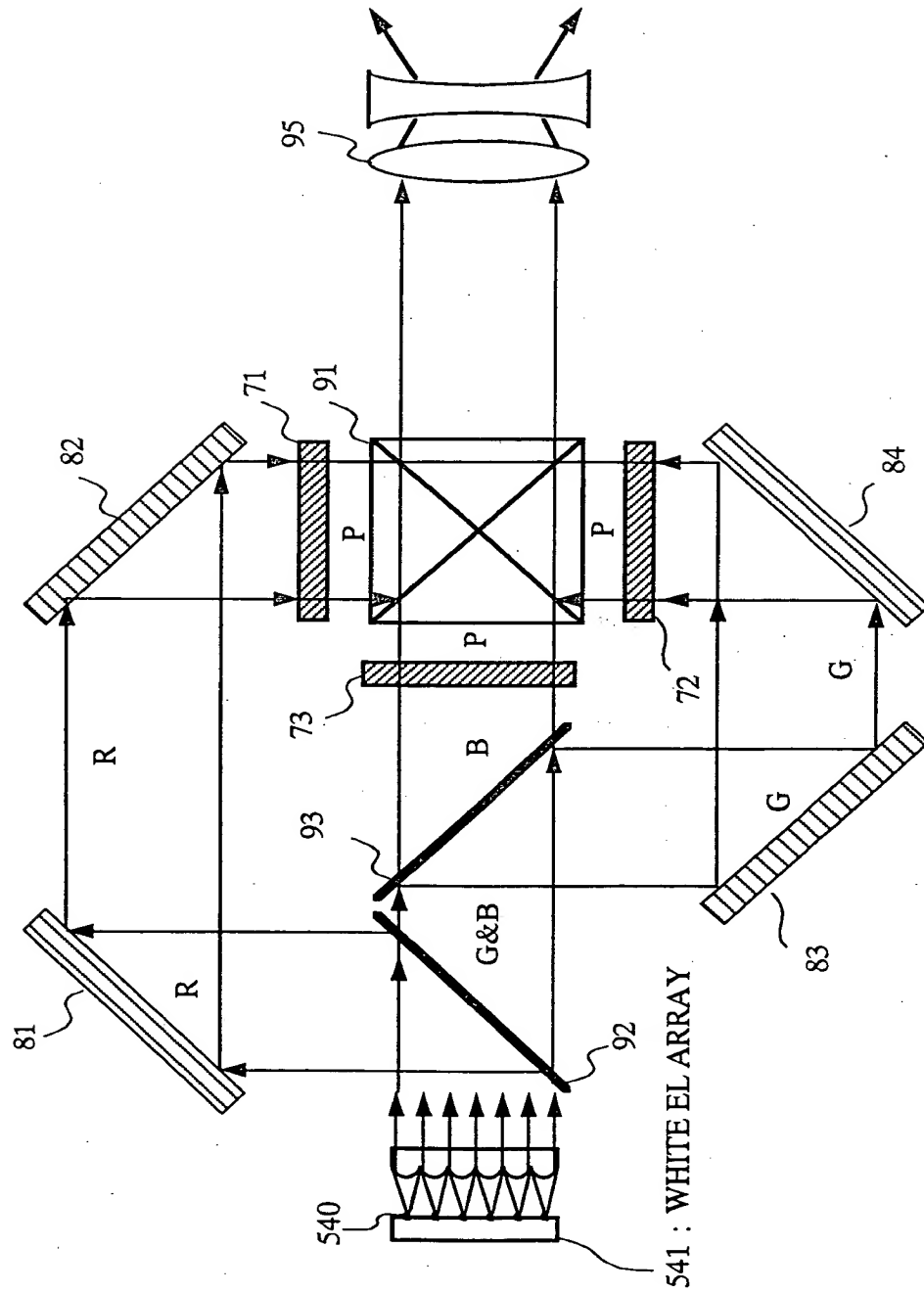
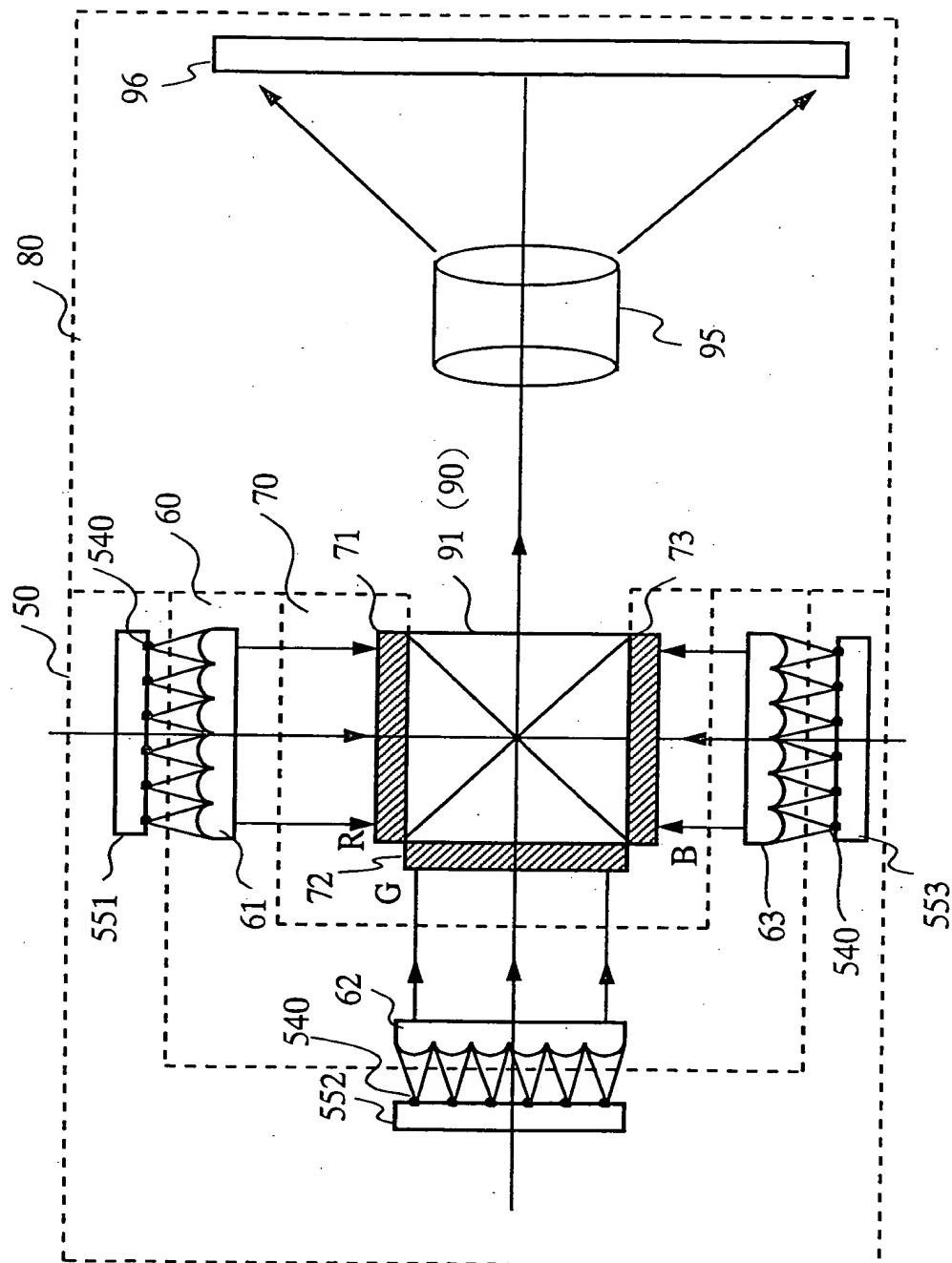


Fig. 76



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Fig.77

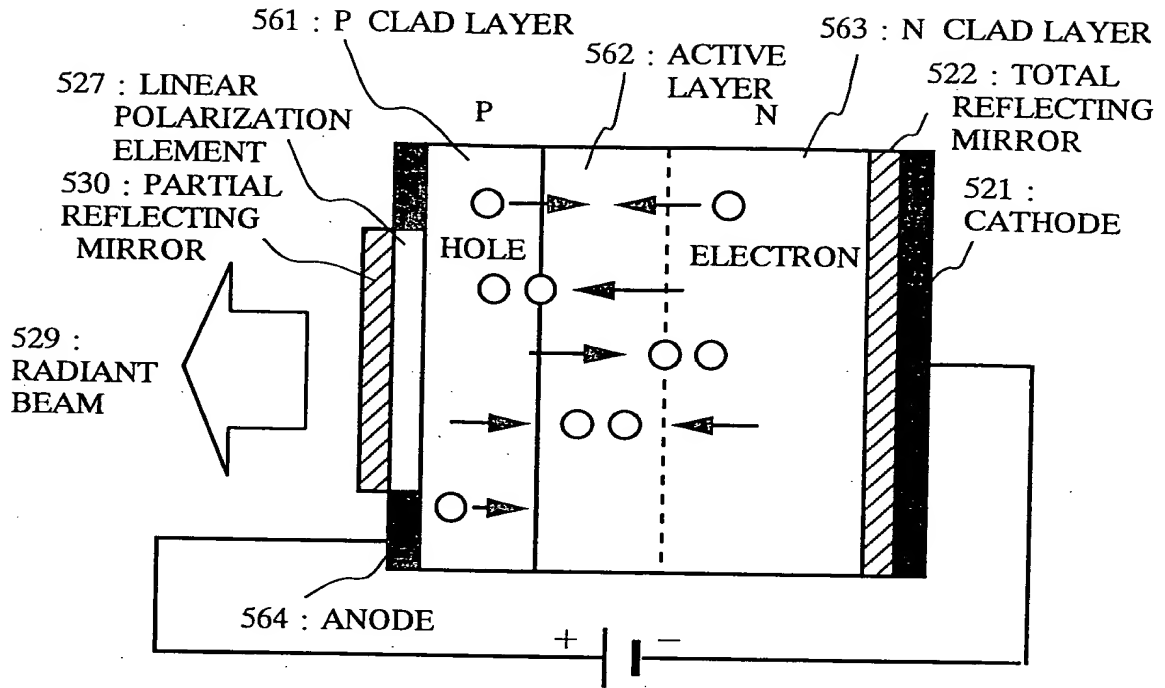
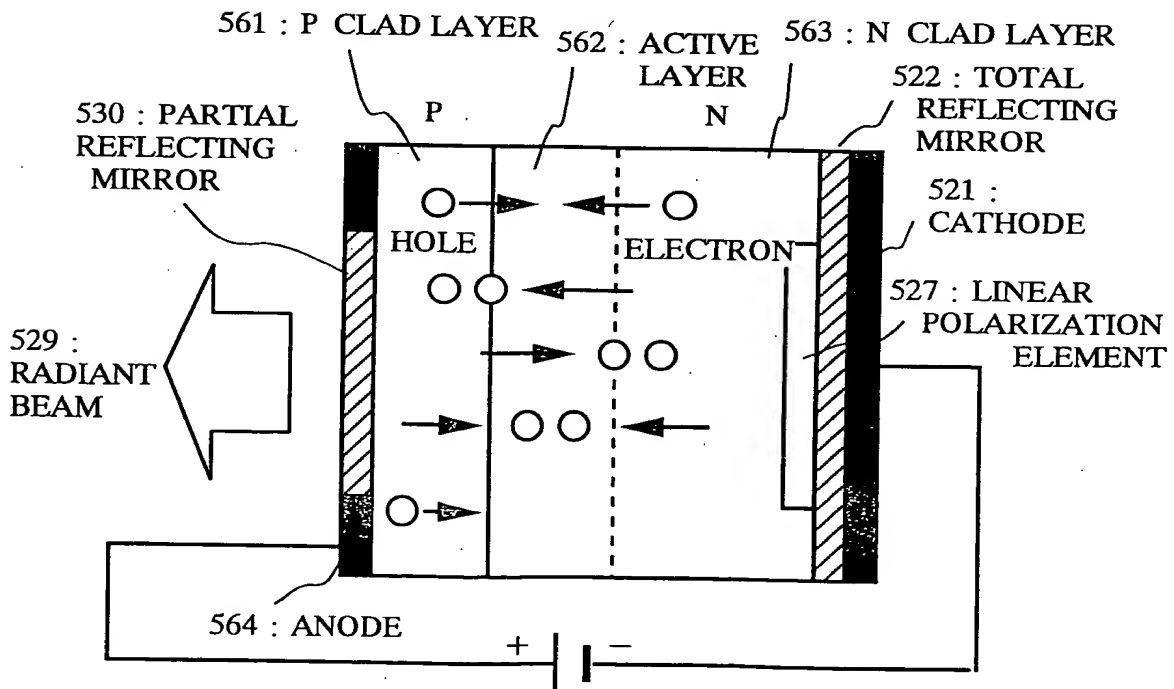


Fig.78



570 : FED

Fig.79

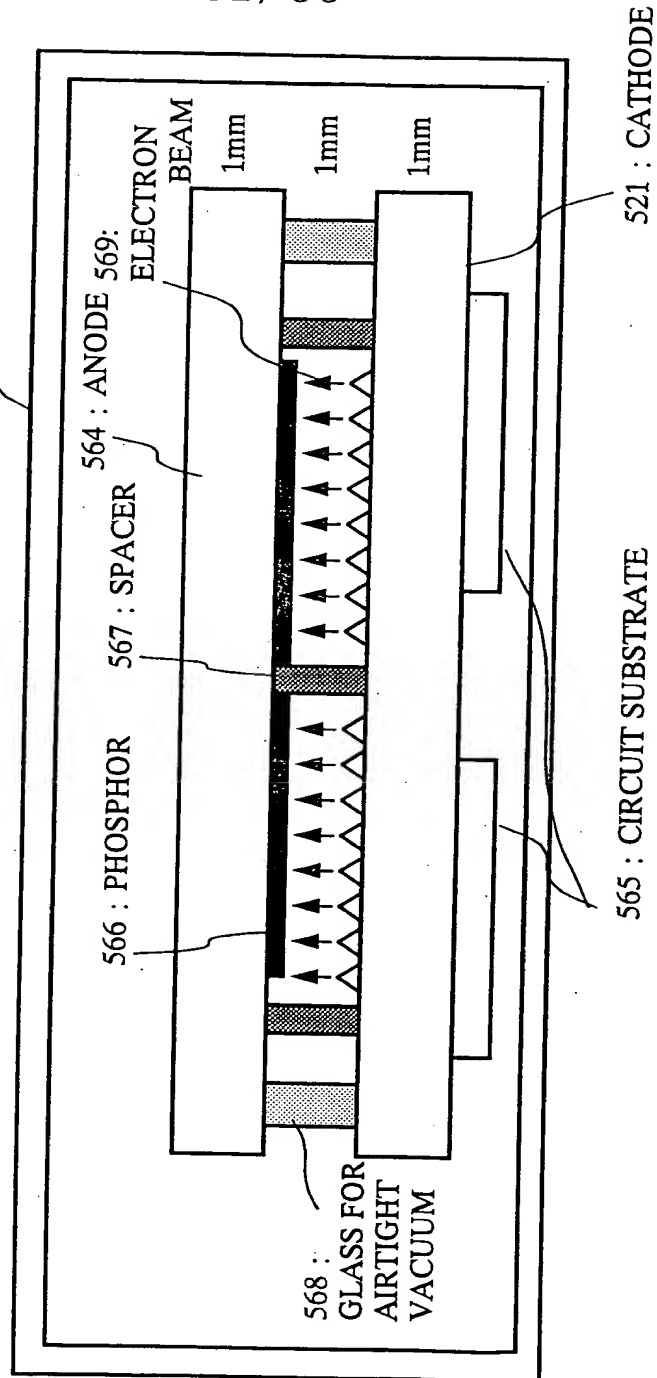


Fig. 80

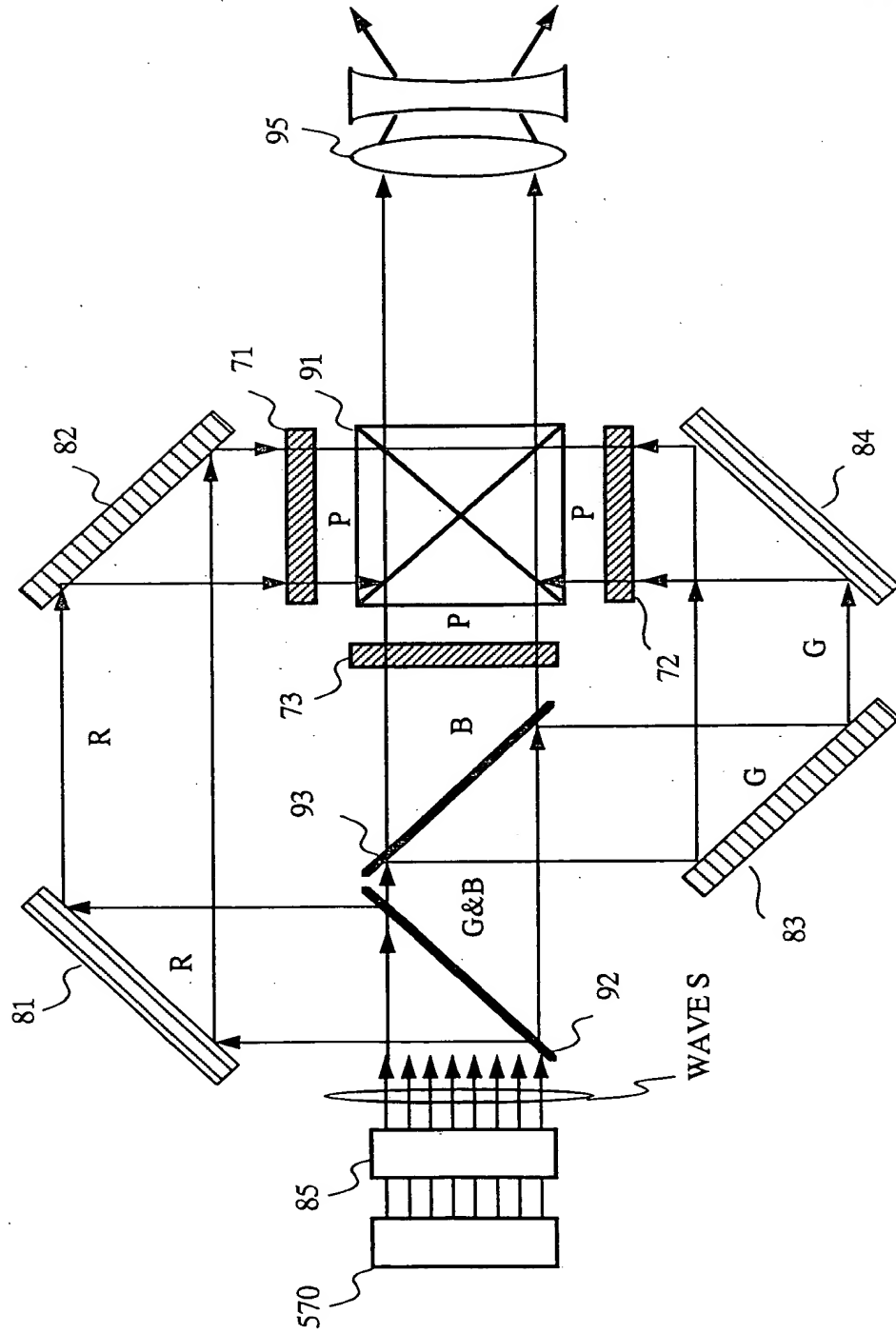
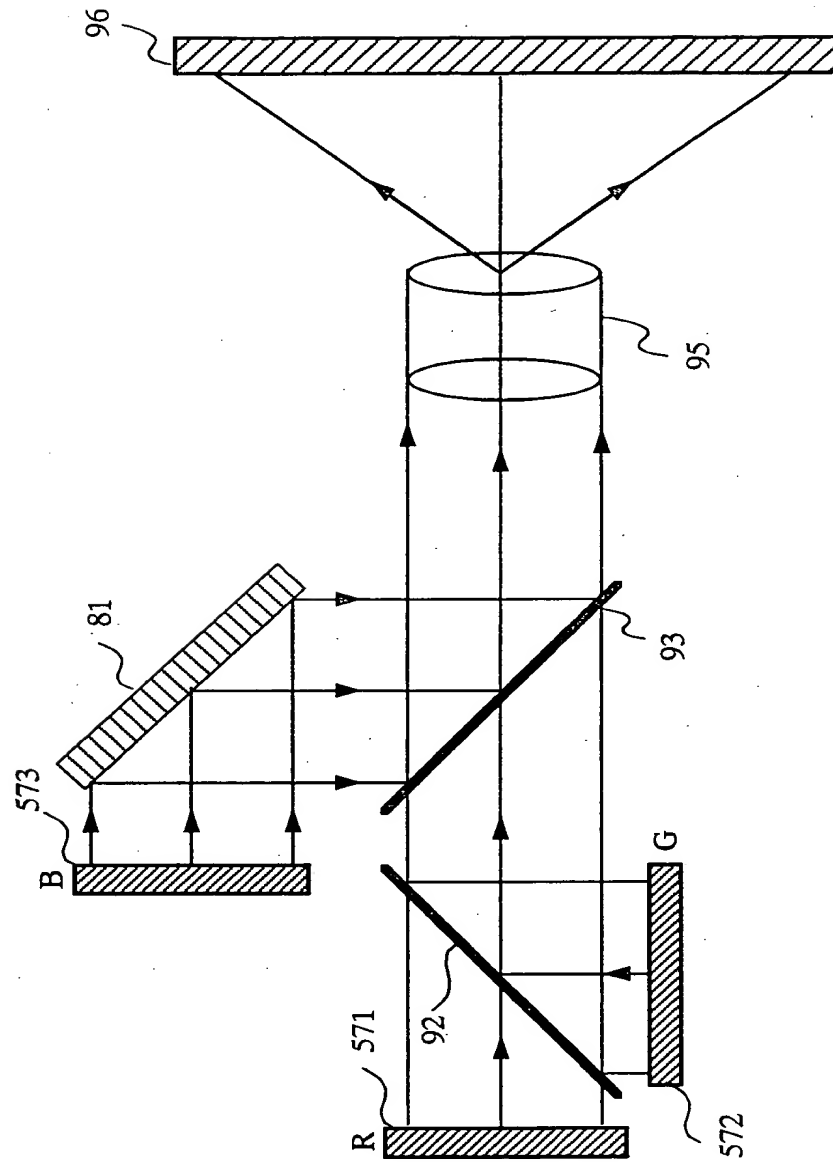


Fig. 81



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Fig.82

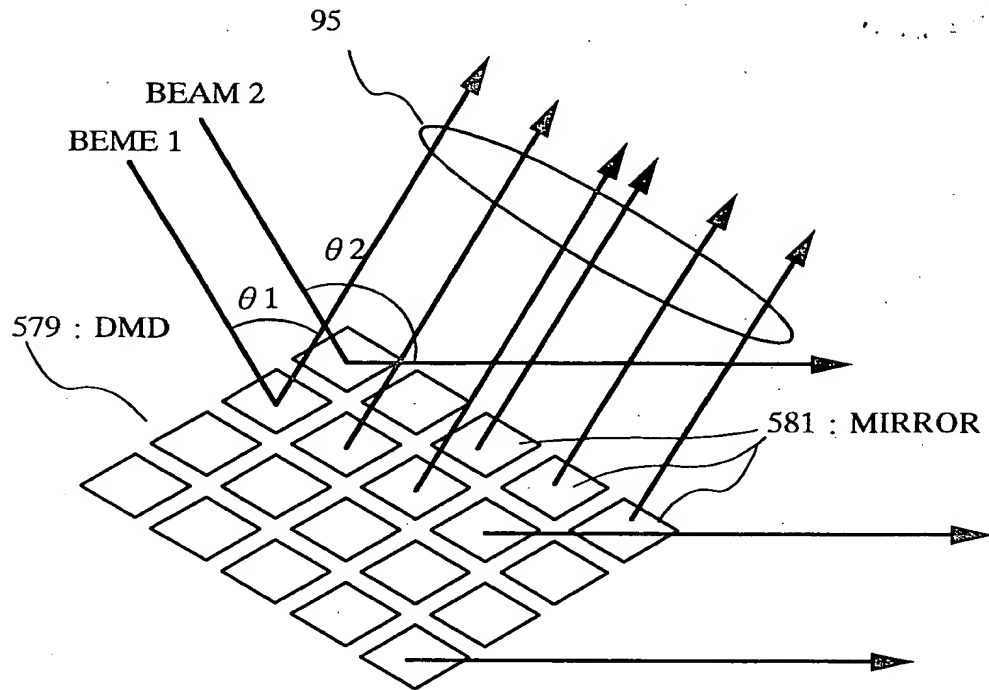


Fig.83

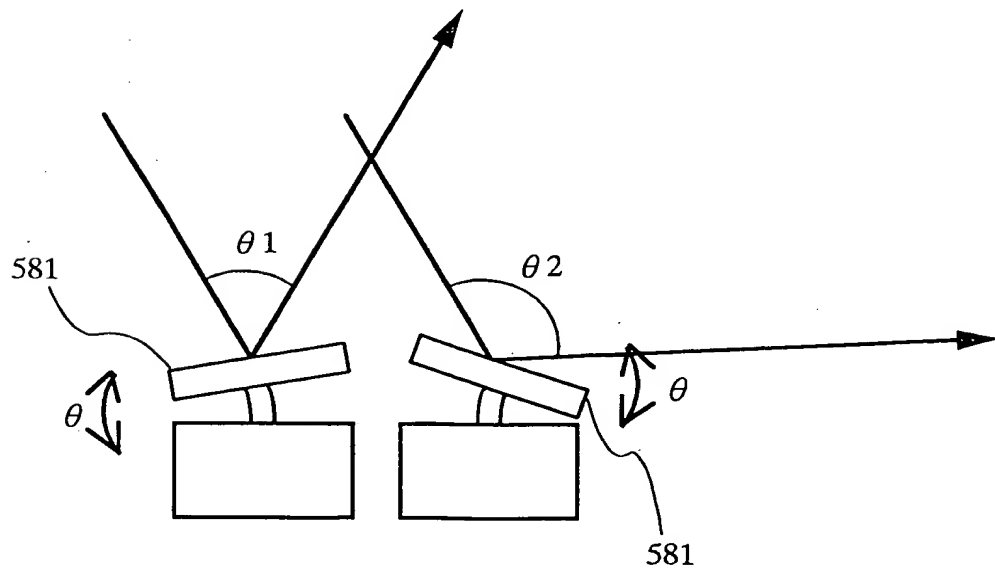


Fig.84

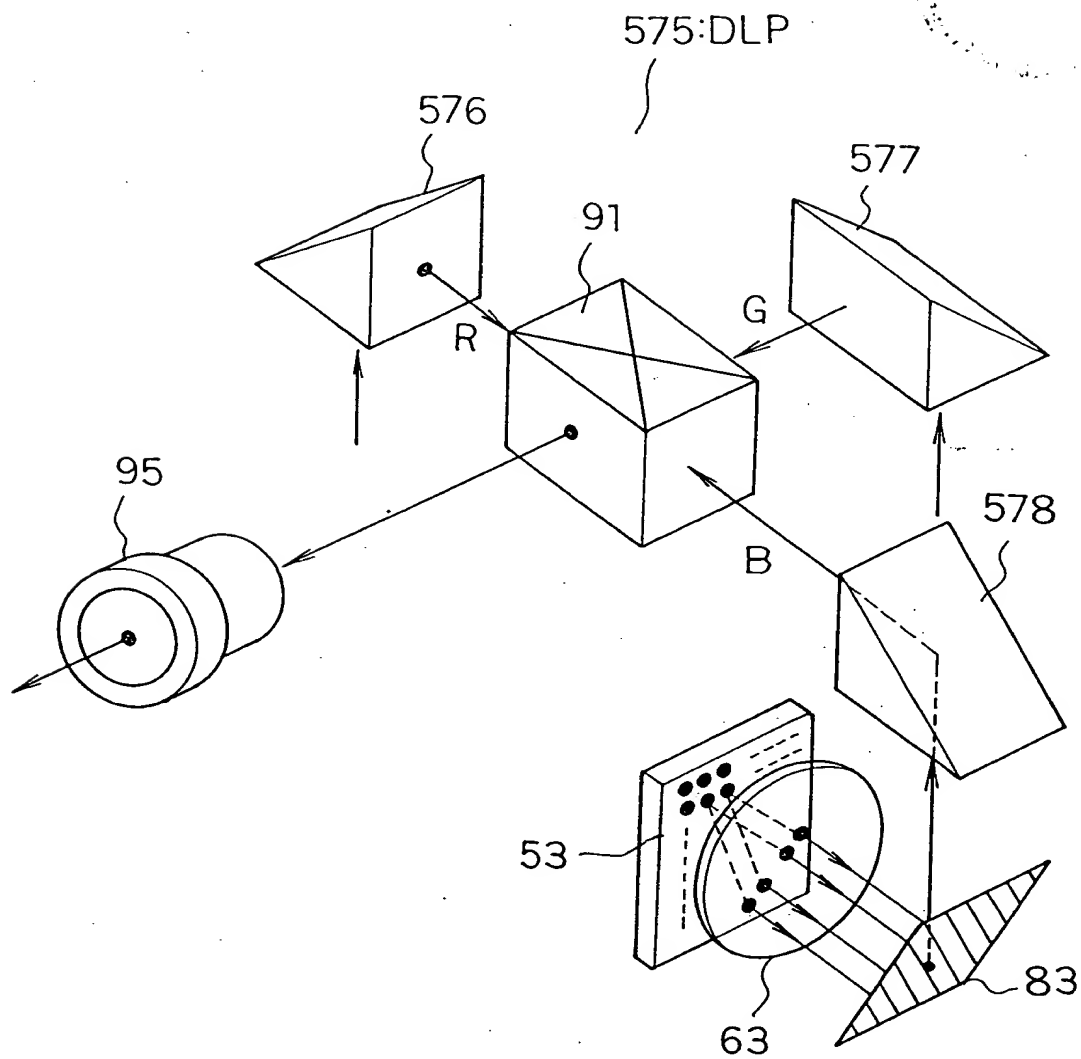


Fig. 85

